

# AN EMPIRICAL INVESTIGATION OF THE INFLUENCE OF SERVANT LEADERSHIP AND ORGANIZATIONAL VIRTUES ON INNOVATION IN PUBLIC ORGANIZATIONS

*Shuktika Chatterjee, School of Public Policy and Leadership, University of Nevada, Las Vegas, 4505 S. Maryland Parkway, Las Vegas, NV 89154, 702-895-4333, [shuktika.chatterjee@unlv.edu](mailto:shuktika.chatterjee@unlv.edu)*

*Dora Chatterjee, Coral Academy of Science, Las Vegas, 1051 Sandy Ridge Ave, Henderson, NV 89052, 702-776-8800, [2022.dora.chatterjee@my.caslv.org](mailto:2022.dora.chatterjee@my.caslv.org)*

*Sutirtha Chatterjee, Lee Business School, University of Nevada, Las Vegas, 4505 S. Maryland Parkway, Las Vegas, NV 89154, 702-895-3974, [sutirtha.chatterjee@unlv.edu](mailto:sutirtha.chatterjee@unlv.edu)*

## ABSTRACT

This study investigates the effect of servant leadership and organizational virtues on innovation in public organizations. It is theorized that servant leadership influences four cardinal organizational virtues, namely, wisdom, courage, justice, and temperance. These virtues in turn will influence innovation. The hypotheses are tested with an empirical study of managers in public organizations. The results support all our hypotheses, with the exception of the effect of organizational courage on innovation. We discuss the contributions of this study, which provides two novel considerations – servant leadership and organizational virtues – to study innovation in public organizations.

**Keywords:** Servant leadership, organizational virtues, innovation, public organizations

## INTRODUCTION AND MOTIVATION

This paper investigates how servant leadership and organizational virtues influence innovation in public organizations. Innovation in public organizations can be formally defined as the “as the implementation of a new – technical, organizational, policy, service or other – concept that changes and improves the functioning and outcomes of the public sector” [42, p. 478]. Innovation in public organizations are necessary in addressing social and economic problems that face the community [34]. Given that the environments facing public organizations have become relatively volatile in recent times, consistent achievement of innovation in public organizations continues to be a challenge [104]. Researchers thus continue to search for key factors that influence innovation in public organizations [11, 34, 48, 60, 99].

This study aims to contribute to this growing stream of research by focusing on two novel factors that can influence innovation in public organizations. They are servant leadership and organizational virtues. It has been argued that leadership is influential in influencing innovation, not only in public organizations, but elsewhere [33]. While there are many types of leadership, we propose that the salient concept of servant leadership is crucial in influencing such public innovation. The key idea of servant leadership is “prioritization of meeting followers’ needs, advocacy for follower involvement in the larger community in which the organization is embedded, and guiding followers to also engage in servant leader behaviors” [103, p. 152]. The ethos of servant leadership is particularly relevant for public organizations – with their focus on community and social welfare - but this salience remains to be studied empirically, and our study contributes on that front.

The study proposes that servant leadership in public organizations influence a core set of ethical characteristics called organizational virtues, which ultimately influence innovation. Drawing upon the work of Aristotle, the famous Greek philosopher, virtue ethics is a powerful anchor to understand organizational ethicality [25, 69]. Given the general focus of public organizations on serving the community and promoting social welfare, organizational ethics (virtues) are a compelling form of ethical attributes that can be useful to understand why public organizations do or do not innovate. However, virtue ethics is limited in its application in public administration and governance, even though “at this point, Aristotle’s philosophy [of virtue ethics] proves to be of lasting relevance for our times” [98, p. 238]. The paper addresses this gap, especially in light of the observation that there is a consistent omission of the role of organizational ethical characteristics – such as those defined by organizational virtues - in understanding innovation in public organizations.

Formally, the research question can be stated as: *What is the impact of servant leadership on organizational virtues and how do organizational virtues, in turn, influence innovation in public organizations?* To address this research question, this study proceeds as follows. In the next section, we review literature on servant leadership, virtue ethics, and innovation in public organization. Following that, we develop our hypotheses. We then report the empirical study used to test the hypotheses and discuss the data analysis and results. Finally, we conclude with the contribution and future implications of the paper.

## LITERATURE REVIEW

### Servant Leadership

The concept of servant leadership, “means serving others and placing the good of others and the organization above the leader's self-interest” [9, p, 104]. The idea of servant leadership was originally developed by Robert Greenleaf, who explained in his view of servant leadership that “the servant leader is servant first ... It begins with the natural feeling that one wants to serve first. Then conscious choice brings one to aspire to lead” [44, p, 7]. The core idea of servant leadership is to balance the dual activities of leading and serving, ensuring that other people’s needs are prioritized and served [92].

According to Patterson [77], servant leadership is primarily based on the certain qualities (values) held by the leader – these values shape the attitude as well as the behavior of the leader. Servant-leaders are those who primarily focus on the followers (i.e. the employees) and economic benefits of the organization often take a second place. The salience of servant-leader constructs are ethical values, which are crucial to achieving moral excellence. Servant-leaders are loving, humble, altruistic, trusting, visionaries, and empowering [35].

### Organizational Virtues

Organizational virtues can be understood by reviewing the stream of virtue ethics in philosophy. Virtue ethics originated in Aristotle’s work [5]. Aristotle argued that an entity is ethical if it possesses certain desirable characteristics (which he called virtues) such as wisdom, courage, temperance, etc. Aristotle argued that entities which possess certain virtues can act in a desirable manner and achieve their preferred goals (Aristotle 1985). Virtues can be understood as “acquired qualities”, “the possession and exercise of which tends to enable us to achieve those goods which are internal to [a community of] practices and the lack of which effectively prevents us from achieving such goods” [67, p. 191].

Aristotle argued that an entity that possesses these virtues will act ethically and be able to achieve its desired purpose, which he termed as *eudaimonia*. Importantly, virtues can be defined at the individual level or at the collective level [21, 22]. At the collective level, virtues define the excellence of a social collective (e.g. a community of practice), such as an organization [90]. Being virtuous just means doing the right thing, and acting appropriately [7]; therefore, given the appropriateness of innovation, virtue ethics becomes a useful perspective to investigate organizational innovation.

Virtues are complex and multilayered organizational constructs which provide more meaningful insights and has more implications, especially in a study of public organizations. This paper considers four of Aristotle's main virtues (also called cardinal virtues) at the organizational level and theorizes that these virtues will have an influence on organizational innovation. The cardinal virtues discussed are wisdom, justice, courage, and temperance. These four cardinal virtues are considered because they either include other virtues or stimulate them [21].

The inherent dynamism in organizational contexts ensures that virtue ethics is an appropriate lens to investigate organizational phenomena [27]. This position is supported by the noted philosopher and ethicist Alasdair MacIntyre (1985) who mentions *that ethics must be "reinterpreted and reformulated according to changing social perceptions of what the 'good' means for particular communities at particular times"* [67, p. 506]. In other words, MacIntyre calls for an understanding of certain virtues that communities may develop and possess, which are germane to the seeking of value within that community.

Organizations are examples of such communities which define, nurture, and practice virtues. Indeed, virtues have associated moral characteristics that can be developed [2]. Thus, they are particularly relevant to organizational functioning, which can aim to develop these virtues. Acting out of virtues is to act in a situation appropriately and normatively [53], thus indicating their appropriateness to public organizations.

### **The Relevance of Organizational Virtues to Public Organizations**

Virtues are especially relevant to study public organizations [98]. Two arguments support this observation. One, organizational virtues allow the organization to undertake certain actions and the second is that public organizations benefit from those actions. This creates an inherent match between what public organizations demand to operate successfully, and what virtues offer in terms of allowing actions that sustain those operations. Combining these two arguments, we can justify the reason for investigating public organizations using the lens of virtue ethics.

To elaborate upon this argument, let us first consider the characteristics of public organizations. Public organizations are characterized by a concern for social welfare, general public value, collaborative production of public goods, and social accountability [4]. These organizations are not directly motivated by profit; instead they are more guided by objectives that are mainly sociopolitical in nature – thereby focusing on resource equity, and being often subjected to public scrutiny [72]. These characteristics of public organizations make them quite different from private, for-profit organizations [79].

It can be immediately seen that organizational virtues offer a plausible way to understand the successful operation of public organizations. First, organizational virtues define a moral purpose of the organization [97]. Therefore, defining the moral purpose of an organization becomes especially appropriate for an organization that is concerned with social welfare and accountability. Again, organizational virtues allow

an organization to develop its unique identity and positioning in the socio-organizational landscape [25]. For a public organization, which is often under continuous public scrutiny, maintaining its image is paramount, and organizational virtues are helpful in that regard. Ultimately, virtues are a source of organizational excellence, both socially and morally [89]; these qualities are very important in public organizations with their focus on social justice and operational equity [83]. Public organizations are ultimately about a sense of pride in serving the community, and virtues are crucial in the development and sustenance of this organizational pride [6].

The applicability of virtue ethics to public organizations is well-summarized by Paine [76] who argues that “a society cannot survive, let alone thrive if exempts it’s most influential and pervasive institutions from all notions of morality” (p.97). Arguably, public organizations hold high salience in a society, and it can be inferred that virtue ethics provides a serious moral impetus to these public organizations. Public organizations are about serving the community with an aim to making its members happy and inculcation of organizational virtues provides a natural pathway to achieving this ultimate aim of a happy and flourishing society [26]. In fact, it has been argued that public organizations should be comprised of professionals who promote and practice virtues—thus making the organization virtuous and helping it align to “a vision of the good life from which society and citizens can flourish” [98, p. 236].

The arguments presented thus far clearly articulate that virtues are an appropriate lens to investigate public organizations; indeed, there is substantial affinity between public organizations and elements of virtuous organizations. It also becomes quite evident that there is a natural overlap between servant leadership, with its focus on ethical issues, and the virtues that an organization can possess. It is logical to infer that an organization that experiences servant leadership will have a greater possibility to define and practice virtues needed for organizational excellence. We build upon this argument in the hypotheses section.

## **Innovation in Public Organizations**

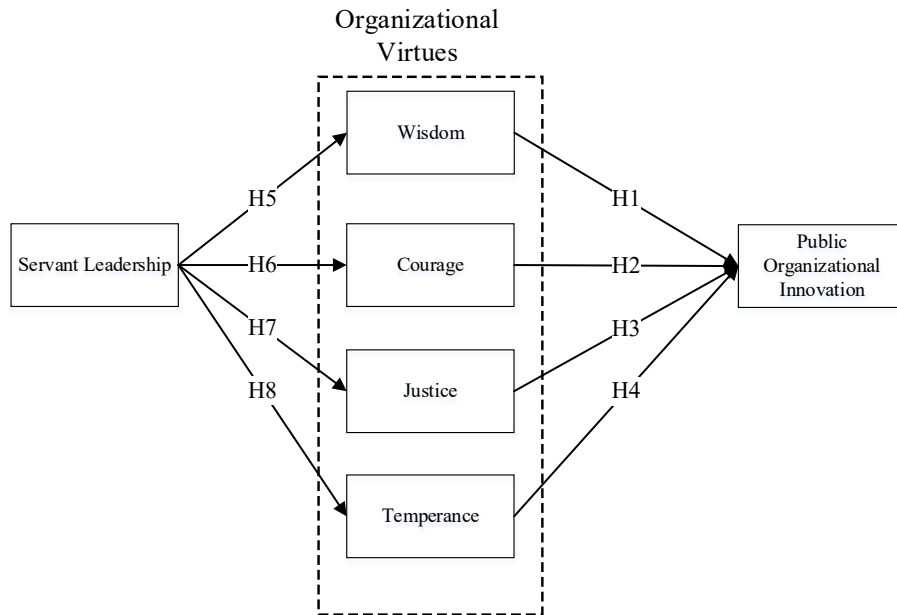
The idea of innovation in public organizations is diverse and scattered - in the public sector, there is no specific definition of the term “organizational innovation” [63]. Most of the work on innovation in public organizations tends to draw upon organizational theories of innovation published in seminal articles.

One stream of innovation literature in organizational theory focuses on structural antecedents to various forms of innovation, such as product and process innovations [19, 96]. Another stream of literature focuses on the theories of organizational change and development, where the purpose is to evaluate and recognize how organizations change innovatively, while overcoming inertia [50, 55, 88]. A few other literatures focus on the theories of organizational cognition and learning [45] and try to understand how these organizational factors influence innovation.

Perhaps the most appropriate understanding of innovation – particularly relevant for the public sector – is provided by the noted Austrian economist, Joseph Schumpeter [84, 85]. Schumpeter’s concept of innovation emphasizes intended benefits (value additions) in terms of a new good, production method, quality, or market [32]. This is a perspective that is readily appropriate for public organizations, because they focus on ultimately creating value and social welfare for the community. Schumpeter’s view of value addition resonates with the philosophy of servant leadership and organizational virtues, especially in the context of public organizations.

## HYPOTHESES DEVELOPMENT

This section develops the theoretical model and proposes the hypotheses. In each sub-section, the specific organizational virtue and servant leadership is discussed, and it is argued as to why that servant leadership will influence virtue. The overall model is shown in Figure 1.



**Figure 1. The Theoretical Model**

### **Organizational Wisdom and Innovation in Public Organizations**

Organizational wisdom is defined as “the judgement, selection and use of specific knowledge for a specific context” [12, p. 597]. Wisdom relates to the ability of choice and meaningful decision-making using existing knowledge [94]. Public organizations often face situations which are uncertain due to unpredictable social, economic and political environments. Organizational wisdom emerges from the overall organizational climate through purposive decision-making and practice to achieve the desired goals [57].

The fundamental implication of wisdom is about being pragmatic, having knowledge, and exercising careful judgement in decision-making in a pursuit of all-round organizational excellence [8]. All-round excellence is a key aspect in public organizations. Organizational wisdom has multiple layers and connotations and has fundamental ramifications in how an organization operates [21]. Each of the implications of organizational wisdom holds salience for organizational excellence and thus, innovation.

Acting wisely allows a public organization to make decisions and enhance their creativity which positively impact the organization. This results in a highly productive public organization, one that is able to enhance their offerings for community and social welfare [11]. An organization that is productive and creative means that it is innovating wisely with new methods to create a positive change in the community [80].

Thus, a wise organization allows for change within the organization that results in organizational innovation, and this is true of public organizations which construct the community with novel offerings of public service by deepening the relationship between the organization and the community [94]. Therefore, we can hypothesize:

***H1. Organizational wisdom will positively influence innovation in public organizations.***

### **Organizational Courage and Innovation in Public Organizations**

A courageous organization accepts challenges and often can risk failure to achieve organizational goals [59]. Courage is very salient to organizational innovation—this is because courage allows us to accept the possibility of failure and still proceed, thereby foster an environment where the organization is free to fail [14]. Ultimately, by developing the ability to experiment and be fearless in the face of failure, courage creates innovational capabilities of organizations [22].

The importance of courage in fostering innovation is all the more salient for public organizations. Public organizations often face risks due to multiple barriers which can include socioeconomic forces, administrative bureaucracy, and demographic and attitudinal problems [13, 56]. The complexity of dealing with multiple public and private stakeholders and designing new products and services for community welfare can only be achieved if the organization is courageous enough to acknowledge the risks that are associated with such complex efforts and still proceed. Therefore, we can hypothesize:

***H2. Organizational courage will positively influence innovation in public organizations.***

### **Organizational Justice and Innovation in Public Organizations**

Organizational justice implies that the organization is fair and ensures equitable treatment [105]. An organization characterized by justice enables social capital among its employees [21]. An organization high on justice has the necessary wherewithal to engage in fair management of integration and acquisition of organizational resources [29], thus building and reinforcing social capital. Organizational innovation is dependent upon shared responsibilities, shared goals and relational trust which are a direct consequence of high social capital [71].

The issue of social capital is especially important in public organizations due to their altruistic focus [30]. Public organizations not only have to develop social capital within the organization itself, but also with other governmental stakeholders and the community [64]. This social capital helps build collaborative creation by leveraging important aspects of social capital, such as trust and shared responsibilities [21]. That is why social capital is an important consideration when public organizations contemplate creativity and innovation [91]. Given that organizational justice enables this social capital, we can hypothesize:

***H3. Organizational justice will positively influence innovation in public organizations.***

### **Organizational Temperance and Innovation in Public Organizations**

Organizational temperance can be defined as the organization's capacity to be restraining and avoid from being excessive in its actions within the organization [21, 38]. Temperance introduces the fundamental

idea of balance and in this case, balance within an organization. Organizational temperance allows organizational innovation because it encourages an organization to explore the extent to which it can prosper. Innovation in an organization should be realistic. Realistic can be understood as something being attainable and useful. A realistic organization requires a balance in their innovational capabilities because without balance, the organization can take decisions that may backfire and result in losses.

Being realistic is essential for public organizations. Due to the existence of multiple stakeholders in any action related to community welfare – often with competing demands – public organizations need to balance these opposing demands and maintain a reasonable path to innovation. In fact, it can be argued that an organization that does not have temperance can go overboard, even in its attempts at producing well-meaning products and services for the community. In other words, innovations produced by public organizations can be effective only when the organization pursues them in a balanced manner. For example, the organization can keep some of its existing offerings and launch a pilot program for a new innovation to gauge its acceptance within the community. Such efforts will ultimately lead to better innovation. Ultimately, a public organization has practice temperance and balance continuity and change [51] while delivering novel products or services; otherwise there will be extreme chaos which will spoil the efficacy of the innovation. Therefore, we hypothesize:

***H4. Organizational temperance will positively influence innovation in public organizations.***

### **Servant leadership and Organizational Wisdom**

A wise organization incorporates attributes like open-mindedness [78] which is a “willingness to question current thinking and practice, to be receptive to emerging possibilities, to share ideas, and to consider differing perspectives” [73, p. 734]. Open-mindedness is an important attribute of public organizations [3]. because of the variety of sociopolitical issues these organizations grapple with [54].

Due to the salience of open-mindedness in organizational wisdom, servant leadership has an important influence on wisdom in public organizations. Servant leadership is exhibited through sincerity [102] and open-mindedness [16]. Both these characteristics of servant leaders stimulate the employees in the organization to follow them, turning the organization into one that is sincere and open-minded – key characteristics of organizational wisdom.

For example, employees in a public organization with a servant leader who is sincere, will be encouraged to be sincere to opportunities for organizational learning. This is especially necessary as public organizations embrace new forms of governance and functioning, such as through the adoption of IT [33]. Again, a public organization with a servant leader will take precautions in order to avoid organizational pressures by instituting proper policies to stimulate employees to explore alternate viewpoints and learning resources, which is necessary in a public organization due to the complex set of stakeholders. Ultimately, such efforts by the servant leader will allow the organization to build collective wisdom among its employees [21]. Trustworthy servant leaders in public organizations establish reliable relationships with their employees and other governmental stakeholders, who in turn dedicate themselves to the learning and development, thus developing overall collective wisdom to act appropriately in situations. Therefore, it can be hypothesized:

***H5. Servant leadership will positively influence organizational wisdom in public organizations.***

## **Servant leadership and Organizational Courage**

A courageous organization is one that is willing to accept risks and challenges so as to achieve organizational objectives [58, 89]. Courage encapsulates persistence, zest, and goal orientation [25, 78, 86]. Interpreting this to our context of servant leadership, a servant leader often energizes his/her employees for action [15]. In addition, a servant leader is willing to accept personal challenges so as to benefit the organization and is inspirational and courageous, acting with a specific vision for the organization [39]. These attributes of a servant leader allow his/her subordinates to be enthused into accepting new challenges with a positive frame of mind, allows them to use organizational systems mindfully, but decisively.

In a public organization, with multitude of stakeholder pressures, acting decisively is very important. Led by the servant leader the organizational collective is enthused into accepting challenges, but also being mindful of not being foolhardy or taking dangerous action [59]. Therefore, it can be hypothesized:

***H6. Servant leadership will positively influence organizational courage in public organizations.***

## **Servant Leadership and Organizational Justice**

Organizational justice is a fundamental organizational construct and a core virtue in organizations. An organization has the virtue of justice when it is fair in making its decisions and allocating resources so that it upholds equity amongst the organizational employees [28, 43]. The key issue of organizational justice is with fairness and an organization that has the virtue of justice operates in a fair manner [31]. Fairness is a fundamental idea of public organizations with their overall focus on social and public welfare [24].

A servant leader of the public organization imbibes responsibility and accountability among its employees [82]. In such situations, organizational employees become loyal to the organization, as well as to other employees and the community that public organization serves; thus, they work better collaboratively [95]. It is also true that organizational justice comes from its leaders [17, 18] and these are the same leaders who institute the growth of an organization. Therefore, in a public organization with a servant leader, employees are likely to feel a sense of fairness, accountability, and sincerity. A sense of fairness and accountability will ensure that employees also practice the same fairness. When employees collectively believe in and practice fairness and accountability, the entire organization becomes fair or just. Therefore, we can hypothesize:

***H7. Servant leadership will positively influence organizational justice.***

## **Servant Leadership and Organizational Temperance**

The virtue of organizational temperance can be defined as the organization's capacity to be restraining and avoid from being excessive in its actions within the organization [21, 38]. Due to many pressures that public organizations face from the sociopolitical environment, temperance is an important attribute in public organizations [52]. Too much change will create chaos within the organization and the community it serves and will be detrimental to organizational aims to implement community welfare [37]. Clearly, any public organization should be careful about balancing its actions (that is, practice temperance) so that community and societal interests are not compromised [87].



A servant leader exercises this self-control in his or her actions [47]. A servant leader believes in balancing actions such that undue focus on one aspect is minimized and alternate focuses of action gain equal prominence [46, 101]. It is obvious that servant leader has an attitude which can nurture temperance within an organization. A servant leader in a public organization focuses on organizational change, but not at the cost of disruption, thus balancing aspects of change and continuity. All the servant leaders throughout history have ensured that their followers do not become fixated on one particular aspects of either continuity or change; rather they have always made sure that their followers develop a wider, balanced perspective. Interpreting this in the context of a public organization it can be theorized a public organization having a servant leader will be balanced and thus practice temperance. Therefore, we can hypothesize:

***H8. Servant leadership will positively influence organizational temperance.***

## EMPIRICAL STUDY

### Collecting data via third party firms

The data collection used an online survey in public organizations, conducted with the help of a reputed market research firm, *Qualtrics*. Qualtrics is one of the preferred third-party vendors for the university that two of the authors are associated with. They are reputable and thus were deemed to be a trusted source to conduct this survey.

Using Qualtrics allowed us to leverage the advantages of third-party market research firms, as recounted in prior work [20, 66]. These advantages include the ability to reach high level employees in public organizations, who have prior established relationships with the firm. In contrast to the researchers, who are unknown to the survey respondents, and are limited in their ability to collect data across vast geographical divides, market research firms have the established capability to administer surveys across geographical divides and also ensure participation from high level organizational employees.

### Sample

This study was part of a larger effort investigating multiple organizational factors related to innovation in public organizations. As per the norm, the researchers provided a desirable sample size to the third party market research firm and also specified the criteria for participant eligibility [49]. The key informant strategy was employed in the data collection where the survey respondents know about the phenomenon under investigation [106]. Because of our research focus, the respondents were screened using appropriate questions which included:

- I am currently a manager in a public organization with at least 5 years of experience (Yes/No). This question was to ensure that, being a manager, they were cognizant of the leadership in the organization.
- I am reasonably knowledgeable about how my organization builds innovation capabilities to deliver new products/services to the community (Yes/No).
- I am reasonably knowledgeable about the innovation activities (e.g. new products, services, etc. for social and community welfare) that my organization pursues (Yes/No).

If the respondents answered “No” to any of the above questions, they were screened out as a respondent. The contracted sample size was 200 for the study from Qualtrics. We paid Qualtrics USD \$4000 for the contracted sample of 200. Qualtrics informed us that they had sent out the survey invitation to approximately 1800 managers in public organizations, for an approximate survey response rate of 11.1%, which is typical of survey response rates in similar studies.

### **Pilot and Final studies**

A pilot study was conducted with the help of Qualtrics. The pilot size was 22 respondents and consisted of subjects that were eligible for our full study. Pilot results were analyzed for reliability and validity issues, and some minor changes to the survey instrument was made. The final data collection was launched thereafter and returned a total of 178 responses (this was 22 less than our contracted sample size of 200, as the 22 respondents served as the pilot).

### **Measures and Controls**

Measures for virtues were adopted from Chatterjee, et al. [21] and adapted from Wang and Hackett [100]. Servant leadership items were adapted from [65]. Innovation items were adapted from [70] and customized to the public organizational context.

Items were measured on a standard Likert-type 7-point scale (from Strongly Agree to Strongly Disagree). We included an additional anchor, “No Knowledge/Cannot Answer,” to identify any respondents who had no knowledge regarding the specific question being asked and who may have been missed by the screening questions. No subjects selected this option.

Our study included individual level control variables such as respondent age, education level, position at organization, experience, and gender. In addition, organizational level control variables were also considered, such as organizational size, organizational age, sector which the organization belongs to, and growth of the organizational sector. In particular, none of the control variables were significant predictors of the dependent variable, and we eliminated the insignificant results from the final model to simplify the presentation. The demographic variables are presented in table 1.

<b>Table 1. Demographic Details</b>	
<b>Attribute</b>	<b>Demographic Details</b>
Organizational Sector Distribution (# of organizations in each sector)	Social Care: 17; Health: 37; Education: 18; Utilities: 19; Law Enforcement: 13; Others: 18
Organizational Size	Under 100 employees: 45; 101 to 500 employees: 48; 501-1,000 employees: 27; 1,000 – 5000 employees: 37; Over 5000 employees: 21
Organizational Age	0-10 years: 28; 11-20 years: 58; 21-30 years: 31; 31-40 years: 28; 41-50 years: 14; Over 50 years: 19
Highest Education of Respondents	High school / secondary school or equivalent: 26; Associate degree: 36; Bachelor’s degree: 56; Master’s degree: 53; Doctoral degree: 7
Total Professional Experience	0-5 years: 16; 6-10 years: 72; 11-15 years: 26; 15-20 years: 34; Over 20 years: 30
Number of Employees Managed	0-10: 42; 11-25: 48; 26-50: 24; 51-100: 39; Greater than 100: 25
Age of the Respondents	18-25 years: 17; 26-35 years: 54; 36-45 years: 58; 46-55 years: 30; Greater than 55 years: 19
Gender of the Respondents	Male: 94; Female: 84

## RESULTS AND ANALYSIS

### Measurement Model

Model testing was implemented using Partial least squares (PLS). PLS is a structural equation modeling approach especially appropriate while developing new theory; in addition PLS does not assume normality for data analysis and thus provides more reliable results when sample size is comparatively smaller and data is non-normal [23]. The tool WarpPLS7.0 was used to analyze the data.

Following recommendations by Fornell and Larcker [40], the measurement model was assessed by investigating reliability, followed by convergent and discriminant validities. The composite reliabilities of our constructs were 0.916 (servant leadership), 0.807 (wisdom), 0.873 (courage), 0.875 (justice), 0.899 (temperance), and 0.898 (innovation). These reliabilities exceed the threshold recommended, and demonstrates that our instrument was reliable [74]. Convergent validity was assessed by showing that “t-values of the Outer Model Loadings are above 1.96” [41, p. 97], that is they are significant ( $p < 0.05$ ). All the measurement items met this criterion, and therefore our instrument demonstrated convergent validity (please see table 2).

There were two steps to assess discriminant validity. The first step was to ensure that the items loading higher on their appropriate constructs as compared to other constructs. The second step was to make sure that the average variance extracted (AVE) was much greater than correlations between any pair of latent constructs. As shown in table 3, the loadings of all the items exceeded the benchmark of 0.7 [74], with only two exceptions, where the items loaded at 0.657. Given that this value was close enough to the benchmark of 0.7, the final analysis retained these items. It was also observed that the correlations between latent variable pairs were much smaller than the square root of the AVEs, which themselves were also higher than the typical recommendation of 0.5 [40]. Combining the reliability and validity analysis, it can be inferred that our instrument was appropriate.

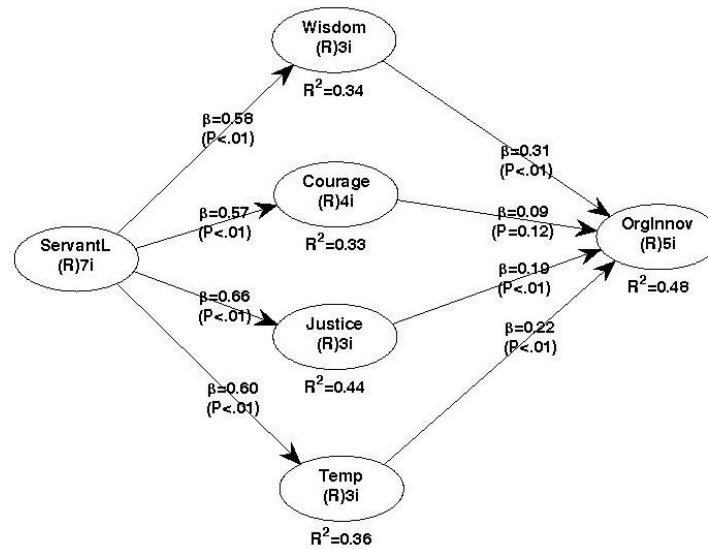
Items	Wisdom	Courage	Justice	Temperance	Innovation	Servant Leadership	Std. Error	Significance
<b>Overall, my organization...</b>								
...is wise	<b>(0.837)</b>	-0.070	0.298	-0.277	0.225	-0.045	0.063	<0.001
...can be labeled as prudent.	<b>(0.657)</b>	0.173	-0.616	0.310	-0.150	-0.033	0.066	<0.001
...possesses good judgment.	<b>(0.790)</b>	-0.069	0.197	0.035	-0.114	0.075	0.064	<0.001
<b>My organization...</b>								
...often makes bold decisions	-0.223	<b>(0.811)</b>	0.049	-0.081	0.118	0.043	0.064	<0.001
...is willing to take a chance on a good idea	-0.022	<b>(0.801)</b>	0.386	-0.047	-0.011	-0.082	0.064	<0.001
...takes calculated risks	0.240	<b>(0.816)</b>	-0.183	0.218	-0.097	-0.032	0.063	<0.001
...occasionally takes big risks	0.004	<b>(0.750)</b>	-0.267	-0.099	-0.010	0.076	0.064	<0.001
<b>My organization...</b>								
...allocates valued resources in a fair manner.	0.164	0.064	<b>(0.862)</b>	-0.086	0.025	-0.137	0.063	<0.001
... resolves conflicts in a fair and objective fashion	-0.088	-0.073	<b>(0.849)</b>	0.051	0.104	-0.122	0.063	<0.001
... respects individual interests and rights when allocating responsibilities	-0.084	0.008	<b>(0.797)</b>	0.038	-0.138	0.278	0.064	<0.001

<b>My organization...</b>								
...balances change with stability.	-0.099	0.063	-0.027	<b>(0.836)</b>	0.093	-0.098	0.063	<0.001
... avoids imbalance between organizational change and stability	-0.034	-0.034	0.130	<b>(0.874)</b>	-0.095	0.032	0.063	<0.001
... is balanced in its pursuit of both organizational change and stability	0.127	-0.025	-0.103	<b>(0.885)</b>	0.006	0.060	0.063	<0.001
<b>My organization...</b>								
... has introduced new products and/or services to serve community stakeholders	-0.046	0.085	0.180	0.117	<b>(0.833)</b>	-0.267	0.063	<0.001
... has launched new products and/or services to serve community stakeholders	0.268	-0.282	-0.030	-0.034	<b>(0.755)</b>	0.032	0.064	<0.001
... experiments with new products and/or services targeted toward community stakeholders	-0.160	0.132	0.045	-0.060	<b>(0.780)</b>	0.162	0.064	<0.001
...develops new products and/or services for community stakeholders	-0.026	0.016	-0.121	-0.005	<b>(0.830)</b>	0.111	0.063	<0.001
...promotes new products and/or services for community stakeholders	-0.021	0.032	-0.078	-0.027	<b>(0.789)</b>	-0.026	0.064	<0.001
<b>The senior most leader in my organization...</b>								
...emphasizes the importance of giving back to the community	-0.105	0.061	-0.200	0.209	0.278	<b>(0.657)</b>	0.066	<0.001
...can tell if something in the organization is going wrong	0.000	-0.037	0.188	-0.063	0.029	<b>(0.801)</b>	0.064	<0.001
...makes the career development of employees a priority	0.087	0.014	0.170	-0.136	0.048	<b>(0.865)</b>	0.063	<0.001
...is someone I would seek help from if I had a personal problem	-0.014	0.094	0.084	-0.044	-0.151	<b>(0.795)</b>	0.064	<0.001
...puts the employees' best interests ahead of his/her own	0.103	0.028	-0.146	0.017	-0.113	<b>(0.837)</b>	0.063	<0.001
...gives employees the freedom to handle difficult situations in the way that they feel is best	-0.015	-0.018	-0.112	-0.074	0.117	<b>(0.796)</b>	0.064	<0.001
...would NOT compromise ethical principles in order to achieve success	-0.098	-0.151	-0.032	0.158	-0.180	<b>(0.703)</b>	0.065	<0.001

<b>Table 3. Average Variance Extracted and Correlations</b>						
(AVEs along the diagonal)						
	Wisdom	Courage	Justice	Temperance	Innovation	Servant Leadership
Wisdom	<b>(0.765)</b>	0.595	0.717	0.526	0.415	0.492
Courage	0.595	<b>(0.795)</b>	0.534	0.510	0.420	0.475
Justice	0.717	0.534	<b>(0.837)</b>	0.740	0.526	0.652
Temperance	0.526	0.510	0.740	<b>(0.865)</b>	0.540	0.601
Innovation	0.415	0.420	0.526	0.540	<b>(0.798)</b>	0.575
Leadership	0.492	0.475	0.652	0.601	0.575	<b>(0.782)</b>

## Structural Model

The structural model is shown in figure 2. The R-squared for the endogenous constructs were also much higher than the recommended benchmark of 10% [36]. The variance explained for innovation was 48%. The variance explained of wisdom was 34%, that of courage was 33%, that of justice was 44%, and that of temperance was 36%. The level of variance explained demonstrates that our model had high predictive power.



**Figure 2. The Structural Model**

All the path coefficients were significant at the  $p<0.05$  level, with the exception of the effect of organizational courage on organizational innovation (H6). Especially, the effect of servant leadership on organizational virtues was quite strong, with all coefficients above 0.5. The non-significant effect of courage was a surprising result, as it has been previously established that courage is crucial in innovative endeavors [22]. However, this result could be an artifact of our sample of public organizations, as public organizations are often bound by governmental and legal constraints and have less chance to be bold or adventurous. It is possible that the focus on community welfare, which is a prime characteristic of public organizations, defrays any possibilities of bold decision-making and promotes a more conservative approach. This of course needs to be investigated further in future research.

## DISCUSSION: CONTRIBUTION AND FUTURE IMPLICATIONS

This study contributes by forwarding two important considerations for innovation in public organizations: servant leadership and organizational virtues. Research on public organizations have traditionally eschewed the concept of organizational virtues and we feel this is a crucial blind sightedness that needs to be addressed. The study also shows that the notion of servant leadership is absolutely crucial to the development on organizational virtues.

Our study shows that leadership is crucial to develop ethical organizations and aligns with the observation that ethical organizations require the presence of an agent that fosters organizational ethicality [10]. The strong effect of servant leadership on organizational virtues could also be an artifact of the fact that we are investigating public organizations where the relevance of virtues is more salient, due to their focus on common good [98].

Other empirical findings of the study also contribute nuanced insights into the phenomenon. While virtues are crucial to innovation, the most prominent effects are those of organizational wisdom and organizational temperance. This is understandable, as innovation needs wise decision-making, where the organization progresses by carefully analyzing the sociocultural factors that form the immediate context of the organization [57]. This is especially important for public organizations, as they have to satisfy range of private and public stakeholders and thus need to tread carefully and prudently [81]. In fact, organizational wisdom is a key consideration in public administration [61, 93], and our empirical results show that it directly fosters innovation.

Temperance is also important in organizational change. The concept of temperance harks back to the idea that the organization manages change and stability efficiently. Such organizations are often ambidextrous [75] and successfully manage research and development while executing their daily operations [1]. The ambidexterity in public organizations is even more important, given that they have to continue improving their service level to the community while also ensuring that no disruption happens in the current operations [68]. Finally, justice perhaps defines the essence of a public organization with its inherent demand for fairness and equity [62]. Therefore, a successful public organization (i.e., one that innovates) should engage with justice and our results support this view.

The study also contributes by providing opportunities for future research. For example, researchers should test this model in for-profit organizations to see if the same results hold. Perhaps a comparative analysis of public and private organizations with respect to this model could be undertaken. Researchers also might investigate the surprising result that courage did not have an effect on innovation. It would be worthwhile to study if this finding holds true for private organizations as well. Finally, researchers could also investigate other forms of organizational leadership (e.g. transformational leadership) to study whether such leadership also has the same impact on virtues in both private and public organizations. Overall, we hope that this research fosters newer studies on leadership, ethics, and innovation in organizations.

## REFERENCES

1. Agostini, L.; Nosella, A.; and Filippini, R. Towards an integrated view of the ambidextrous organization: A second-order factor model. *Creativity and Innovation Management*, 25, 1 (2016), 129-141.
2. Alzola, M. Character and environment: The status of virtues in organizations. *Journal of Business Ethics*, 78, 3 (2008), 343-357.
3. Androniceanu, A. New public management model based on an integrated system using the informational and communication technologies. *Administration and Public Management Review*, 13, (2009), 13-25.
4. Antonsen, M. and Jørgensen, T.B. The 'publicness' of public organizations. *Public Administration*, 75, 2 (1997), 337-357.
5. Aristotle. *Nicomachean ethics*, trans. Terence irwin. Indianapolis: Hackett, 1985.

6. Arjoon, S. Virtue theory as a dynamic theory of business. *Journal of Business Ethics*, 28, 2 (2000), 159-178.
7. Arjoon, S. Reconciling situational social psychology with virtue ethics. *International Journal of Management Reviews*, 10, 3 (2008), 221-243.
8. Baltes, P.B. and Staudinger, U.M. Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence. *American psychologist*, 55, 1 (2000), 122.
9. Banks, R.J. and Ledbetter, B.M. *Reviewing leadership (engaging culture): A christian evaluation of current approaches*: Baker Academic, 2004.
10. Bedi, A.; Alpaslan, C.M.; and Green, S. A meta-analytic review of ethical leadership outcomes and moderators. *Journal of Business Ethics*, 139, 3 (2016), 517-536.
11. Berman, E.M. and Kim, C.-G. Creativity management in public organizations: Jump-starting innovation. *Public Performance & Management Review*, 33, 4 (2010), 619-652.
12. Bierly, P.E.; Kessler, E.H.; and Christensen, E.W. Organizational learning, knowledge and wisdom. *Journal of organizational change management*, (2000),
13. Bjerke-Busch, L.S. and Aspelund, A. Identifying barriers for digital transformation in the public sector. *Digitalization*: Springer, 2021, pp. 277-290.
14. Bodrova, O. Courage and freedom to fail: Innovation, risk and outcomes in public life. *Journal of Behavioural Economics and Social Systems*, 1, 1 (2019), 86-95.
15. Boone, L.W. and Makhani, S. Five necessary attitudes of a servant leader. *Review of Business*, 33, 1 (2012), 83.
16. Bower, M. Developing leaders in a business. *The McKinsey Quarterly*, 4 (1997), 4.
17. Brown, M.E. and Treviño, L.K. Ethical leadership: A review and future directions. *The leadership quarterly*, 17, 6 (2006), 595-616.
18. Brown, M.E.; Treviño, L.K.; and Harrison, D.A. Ethical leadership: A social learning perspective for construct development and testing. *Organizational behavior and human decision processes*, 97, 2 (2005), 117-134.
19. Burns, T. and Stalker, G.M. *The management of innovation*. London: Tavistock, 1961.
20. Chatterjee, S.; D Moody, G.; Lowry, P.B.; Chakraborty, S.; and Hardin, A. The nonlinear influence of harmonious information technology affordance on organisational innovation. *Information Systems Journal*, 31, 2 (2021), 294-322.
21. Chatterjee, S.; Moody, G.; Lowry, P.B.; Chakraborty, S.; and Hardin, A. Strategic relevance of organizational virtues enabled by information technology in organizational innovation. *Journal of Management Information Systems*, 32, 3 (2015), 158-196.
22. Chatterjee, S.; Moody, G.; Lowry, P.B.; Chakraborty, S.; and Hardin, A. Information technology and organizational innovation: Harmonious information technology affordance and courage-based actualization. *The Journal of Strategic Information Systems*, 29, 1 (2020), 101596.
23. Chatterjee, S.; Sarker, S.; and Valacich, J.S. The behavioral roots of information systems security: Exploring key factors related to unethical it use. *Journal of Management Information Systems*, 31, 4 (2015), 49-87.
24. Choi, S. and Rainey, H.G. Organizational fairness and diversity management in public organizations: Does fairness matter in managing diversity? *Review of Public Personnel Administration*, 34, 4 (2014), 307-331.
25. Chun, R. Ethical character and virtue of organizations: An empirical assessment and strategic implications. *Journal of Business Ethics*, 57, 3 (2005), 269-284.
26. Ciulla, J.B. Ethics and effectiveness: The nature of good leadership. *The search for ethics in leadership, business, and beyond*: Springer, 2020, pp. 3-32.

27. Collier, J. Theorising the ethical organization. *Business Ethics Quarterly*, (1998), 621-654.
28. Colquitt, J.A.; Conlon, D.E.; Wesson, M.J.; Porter, C.O.; and Ng, K.Y. Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of applied psychology*, 86, 3 (2001), 425.
29. Colquitt, J.A.; Greenberg, J.; and Zapata-Phelan, C.P. What is organizational justice? A historical overview. *Handbook of organizational justice*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers, 2005, pp. 3-56.
30. Compton, M.E. and Meier, K.J. Managing social capital and diversity for performance in public organizations. *Public Administration*, 94, 3 (2016), 609-629.
31. Cropanzano, R.; Byrne, Z.S.; Bobocel, D.R.; and Rupp, D.E. Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of vocational behavior*, 58, 2 (2001), 164-209.
32. Crossan, M.M. and Apaydin, M. A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies*, 47, 6 (2010), 1154-1191.
33. Damanpour, F. and Schneider, M. Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. *Journal of public administration research and theory*, 19, 3 (2009), 495-522.
34. Demircioglu, M.A. The effects of organizational and demographic context for innovation implementation in public organizations. *Public Management Review*, 22, 12 (2020), 1852-1875.
35. Dennis, R.S.; Kinzler-Norheim, L.; and Bocarnea, M. Servant leadership theory. *Servant leadership*: Springer, 2010, pp. 169-179.
36. Falk, R.F. and Miller, N.B. *A primer for soft modeling*. Akron, OH: University of Akron Press, 1992.
37. Farazmand, A. Chaos and transformation theories: A theoretical analysis with implications for organization theory and public management. *Public Organization Review*, 3, 4 (2003), 339-372.
38. Fehr, R. and Gelfand, M. The forgiving organization: A multilevel model of forgiveness at work. *Academy of Management Review*, 37, 4 (2012), 664-688.
39. Fields, J.W.; Thompson, K.C.; and Hawkins, J.R. Servant leadership: Teaching the helping professional. *Journal of Leadership Education*, 14, 4 (2015),
40. Fornell, C. and Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18, 1 (1981), 39-50.
41. Gefen, D. and Straub, D. A practical guide to factorial validity using pls-graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, 16, (2005), 91-109.
42. Gieske, H.; George, B.; van Meerkerk, I.; and van Buuren, A. Innovating and optimizing in public organizations: Does more become less? *Public Management Review*, 22, 4 (2020), 475-497.
43. Greenberg, J. Organizational justice: Yesterday, today, and tomorrow. *Journal of management*, 16, 2 (1990), 399-432.
44. Greenleaf, R.K. *The power of servant-leadership: Essays*: Berrett-Koehler Publishers, 1998.
45. Greve, H.R. and Taylor, A. Innovations as catalysts for organizational change: Shifts in organizational cognition and search. *Administrative Science Quarterly*, 45, 1 (2000), 54-80.
46. Haar, J.; Brougham, D.; Roche, M.A.; and Barney, A. Servant leadership and work engagement: The mediating role of work-life balance. (2017),
47. Hackett, R.D. and Wang, G. Virtues and leadership. *Management Decision*, 50, 5 (2012), 868-899.
48. Hansen, M.B. Antecedents of organizational innovation: The diffusion of new public management into danish local government. *Public Administration*, 89, 2 (2011), 285-306.



49. Hardisty, D.J. and Pfeffer, J. Intertemporal uncertainty avoidance: When the future is uncertain, people prefer the present, and when the present is uncertain, people prefer the future. *Management Science*, 63, 2 (2017), 519-527.
50. Huff, J.O.; Huff, A.S.; and Thomas, H. Strategic renewal and the interaction of cumulative stress and inertia. *Strategic Management Journal*, 13, S1 (1992), 55-75.
51. Huy, Q.N. Emotional balancing of organizational continuity and radical change: The contribution of middle managers. *Administrative science quarterly*, 47, 1 (2002), 31-69.
52. James, O. Regulation inside government: Public interest justifications and regulatory failures. *Public Administration*, 78, 2 (2000), 327-343.
53. Kamtekar, R. Situationism and virtue ethics on the content of our character. *Ethics*, 114, 3 (2004), 458-491.
54. Karyotakis, K.M. and Moustakis, V.S. Organizational factors, organizational culture, job satisfaction and entrepreneurial orientation in public administration. *The European Journal of Applied Economics*, 13, 1 (2016), 47-59.
55. Kelly, D. and Amburgey, T.L. Organizational inertia and momentum: A dynamic model of strategic change. *Academy of Management Journal*, 34, 3 (1991), 591-612.
56. Kernaghan, K. Changing channels: Managing channel integration and migration in public organizations. *Canadian Public Administration*, 56, 1 (2013), 121-141.
57. Kessler, E.H. Organizational wisdom: Human, managerial, and strategic implications. *Group & Organization Management*, 31, 3 (2006), 296-299.
58. Kilmann, R.H.; O'Hara, L.A.; and Strauss, J.P. Developing and validating a quantitative measure of organizational courage. *Voice and whistleblowing in organizations*: Edward Elgar Publishing, 2013.
59. Koerner, M.M. Courage as identity work: Accounts of workplace courage. *Academy of Management Journal*, 57, 1 (2014), 63-93.
60. Korac, S.; Saliterer, I.; and Walker, R.M. Analysing the environmental antecedents of innovation adoption among politicians and public managers. *Public Management Review*, 19, 4 (2017), 566-587.
61. Küpers, W.M. The art of practical wisdom: Phenomenology of an embodied, wise 'inter-practice' in organization and leadership. *A handbook of practical wisdom*: Routledge, 2016, pp. 37-64.
62. Kurland, N.B. and Egan, T.D. Public v. Private perceptions of formalization, outcomes, and justice. *Journal of public administration research and theory*, 9, 3 (1999), 437-458.
63. Lam, W. Barriers to e-government integration. *Journal of Enterprise Information Management*, (2005),
64. Leana, C.R. and Pil, F.K. Social capital and organizational performance: Evidence from urban public schools. *Organization science*, 17, 3 (2006), 353-366.
65. Liden, R.C.; Wayne, S.J.; Liao, C.; and Meuser, J.D. Servant leadership and serving culture: Influence on individual and unit performance. *Academy of Management Journal*, 57, 5 (2014), 1434-1452.
66. Lowry, P.B.; D'Arcy, J.; Hammer, B.; and Moody, G.D. "Cargo cult" science in traditional organization and information systems survey research: A case for using nontraditional methods of data collection, including mechanical turk and online panels. *The Journal of Strategic Information Systems*, 25, 3 (2016), 232-240.
67. MacIntyre, A. *After virtue*. Notre Dame, IN: Notre Dame University Press, 1985.
68. Magnusson, J.; Koutsikouri, D.; and Päiväranta, T. Efficiency creep and shadow innovation: Enacting ambidextrous it governance in the public sector. *European Journal of Information Systems*, 29, 4 (2020), 329-349.

69. Martin, F. Organizational virtues and organizational anthropomorphism. *Journal of Business Ethics*, (2021), 1-17.
70. Mihalache, O.R.; Jansen, J.J.; Van Den Bosch, F.A.; and Volberda, H.W. Offshoring and firm innovation: The moderating role of top management team attributes. *Strategic Management Journal*, 33, 13 (2012), 1480-1498.
71. Moolenaar, N.M. and Slegers, P.J. Social networks, trust, and innovation. How social relationships support trust and innovative climates in dutch schools. *Social network theory and educational change*, (2010), 97-114.
72. Morris, M.H. and Jones, F.F. Entrepreneurship in established organizations: The case of the public sector. *Entrepreneurship theory and practice*, 24, 1 (1999), 71-91.
73. Neill, S.; McKee, D.; and Rose, G.M. Developing the organization's sensemaking capability: Precursor to an adaptive strategic marketing response. *Industrial Marketing Management*, 36, 6 (2007), 731-744.
74. Nunnally, J. *Psychometric theory*, 2nd ed. New York: McGraw-Hill, 1978.
75. O Reilly, C.A. and Tushman, M.L. The ambidextrous organization. *Harvard business review*, 82, 4 (2004), 74-83.
76. Paine, L. *Value shift: Why companies must merge social and financial imperatives to achieve superior performance*. New York: McGraw-Hill, 2003.
77. Patterson, K.A. *Servant leadership: A theoretical model*: Regent University, 2003.
78. Peterson, C. and Seligman, M.E. *Character strengths and virtues: A handbook and classification*. 1: Oxford University Press, 2004.
79. Rainey, H.G.; Backoff, R.W.; and Levine, C.H. Comparing public and private organizations. *Public administration review*, 36, 2 (1976), 233-244.
80. Rooney, D. and McKenna, B. Wisdom in organizations: Whence and whither. *Social Epistemology*, 21, 2 (2007), 113-138.
81. Rooney, D. and McKenna, B. Wisdom in public administration: Looking for a sociology of wise practice. *Public administration review*, 68, 4 (2008), 709-721.
82. Rupp, D.E.; Shao, R.; Jones, K.S.; and Liao, H. The utility of a multifoci approach to the study of organizational justice: A meta-analytic investigation into the consideration of normative rules, moral accountability, bandwidth-fidelity, and social exchange. *Organizational behavior and human decision processes*, 123, 2 (2014), 159-185.
83. Salkin, P.E. and Lavine, A. Understanding community benefits agreements: Equitable development, social justice and other considerations for developers, municipalities and community organizations. *UCLA J. Envtl. L. & Pol'y*, 26, (2008), 291.
84. Schumpeter, J. The theory of economic development, cambridge, ma: Harvard university. *A Contribution to the Theory of Economic Growth*, (1934),
85. Schumpeter, J.A. *Capitalism, socialism, and democracy*. New York: Harper, 1942.
86. Sekera, L.; Bagozzi, R.; and Charnigo, R. Facing ethical challenges in the workplace. *Journal of Business Ethics*, 89, (2009), 565-579.
87. Smith, E. and Umans, T. Organizational ambidexterity at the local government level: The effects of managerial focus. *Public Management Review*, 17, 6 (2015), 812-833.
88. Snell, S.A. and Dean Jr, J.W. Strategic compensation for integrated manufacturing: The moderating effects of jobs and organizational inertia. *Academy of Management Journal*, 37, 5 (1994), 1109-1140.
89. Solomon, R.C. Corporate roles, personal virtues: An aristotelean approach to business ethics. *Business Ethics Quarterly*, 2, 3 (1992), 317-339.

90. Solomon, R.C. Victims of circumstances? A defense of virtue ethics in business. *Business Ethics Quarterly*, 13, 1 (2003), 43-62.
91. Sözbilir, F. The interaction between social capital, creativity and efficiency in organizations. *Thinking Skills and Creativity*, 27, (2018), 92-100.
92. Spears, L. Reflections on robert k. Greenleaf and servant-leadership. *Leadership & organization development journal*, (1996),
93. Spicker, P. Generalisation and phronesis: Rethinking the methodology of social policy. *Journal of Social Policy*, 40, 1 (2011), 1-19.
94. Spiller, C.; Pio, E.; Erakovic, L.; and Henare, M. Wise up: Creating organizational wisdom through an ethic of kaitiakitanga. *Journal of Business Ethics*, 104, 2 (2011), 223-235.
95. Tatum, B.C. and Eberlin Richard, J. Organizational justice and conflict management styles: Teaching notes, role playing instructions, and scenarios. *International Journal of Conflict Management*, 17, 1 (2006), 66-81.
96. Teece, D.J. Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets. *California management review*, 40, 3 (1998), 55-79.
97. Thomas Whetstone, J. A framework for organizational virtue: The interrelationship of mission, culture and leadership. *Business ethics: a european review*, 14, 4 (2005), 367-378.
98. van Steden, R. Blind spots in public ethics and integrity research: What public administration scholars can learn from aristotle. *Public Integrity*, 22, 3 (2020), 236-244.
99. Walker, R.M. Internal and external antecedents of process innovation: A review and extension. *Public Management Review*, 16, 1 (2014), 21-44.
100. Wang, G. and Hackett, R.D. Conceptualization and measurement of virtuous leadership: Doing well by doing good. *Journal of Business Ethics*, 137, 2 (2016), 321-345.
101. Wang, M.; Kwan, H.K.; and Zhou, A. Effects of servant leadership on work–family balance in china. *Asia Pacific Journal of Human Resources*, 55, 4 (2017), 387-407.
102. Williams, W.A.; Brandon, R.-S.; Hayek, M.; Haden, S.P.; and Atinc, G. Servant leadership and followership creativity. *Leadership & organization development journal*, 38, 2 (2017), 178-193.
103. Wu, J.; Liden, R.C.; Liao, C.; and Wayne, S.J. Does manager servant leadership lead to follower serving behaviors? It depends on follower self-interest. *Journal of Applied Psychology*, 106, 1 (2021), 152.
104. Wynen, J.; Verhoest, K.; and Kleizen, B. More reforms, less innovation? The impact of structural reform histories on innovation-oriented cultures in public organizations. *Public Management Review*, 19, 8 (2017), 1142-1164.
105. Yean, T.F. Organizational justice: A conceptual discussion. *Procedia-Social and Behavioral Sciences*, 219, (2016), 798-803.
106. Zablah, A.R.; Bellenger, D.N.; Straub, D.W.; and Johnston, W.J. Performance implications of crm technology use: A multilevel field study of business customers and their providers in the telecommunications industry. *Information Systems Research*, 23, 2 (2012), 418-435.