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# Government Transparency and Perceived Social Equity: Assessing the Moderating Effect of Citizen Trust in China

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## Abstract [AQ2]

Transparency, trust, and equity are all considered critical components of good governance. However, few studies have looked into the possible impacts of transparency and trust on public perceptions of social equity. This study empirically examines the relationship between government transparency and perceived public service equity, and the moderating effect of citizen trust on that relationship. Using large sample citizen survey data from 36 major cities in China, we find that government transparency is positively related to perceived social equity. The results also reveal that citizen trust plays a moderating role in the relationship between transparency and perceived social equity.

## Keywords

government transparency, citizen trust, social equity, China, public service performance

## Introduction

Transparency, trust, and equity are all considered critical components of good governance. Transparency promotes accountability and provides information for citizens about their government's policies and performance. It is widely believed that transparency will strengthen democracy and promote confidence in government to ensure trust and public support, and establish a system of accountability, fairness, and justice (Fung, Graham, & Weil, 2007;

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Hood, 2006; Meijer, Curtin, & Hillebrandt, 2012). Frederickson (2010) introduced social equity as one of the pillars for public administration 40 years ago. Social equity emphasizes equality in government services, requiring that fairness and justice be paramount (Svara & Brunet, 2005). Fair and reliable public services and predictable decision making inspire public trust and foster transparency. Equity calls for procedural openness, fairness and equal access, and policies that increase equality of opportunity, whereas the existence of transparency and trust is a prerequisite to equitable management in public institutions (Gooden & Portillo, 2011). Without a solid base of transparency and trust, social equity would remain elusive (Johnson & Svara, 2011).

Transparency, trust, and equity are necessary preconditions for legitimacy because without access to clear, accurate, and timely information, and without a sense of fairness and social justice, it is impossible for citizens to have confidence in the government (Tolbert & Mossberger, 2006). Yet, few studies have looked into the possible impact of transparency and trust on public perceptions of social equity. The purpose of this study is to contribute to the research work linking transparency and perceived public service equity. Using large sample survey data from 36 major cities in China, we present an exploratory quantitative analysis of the relationship between perceived transparency and social equity and the possible moderating effect of citizen trust on that relationship.

## Literature Review and the China Context

A broad empirical literature has discussed the relations between transparency and trust in government (Grimmelikhuijsen, 2012; Grimmelikhuijsen, Porumbescu, Hong, & Im, 2013; Kim & Lee, 2012; Porumbescu, 2015b; Rothstein, 2011; Tolbert & Mossberger, 2006; Welch, Hinnant, & Moon, 2005; Worthy, 2010). Many scholars believe that transparency and trust are tightly intertwined, mutually reinforcing, and positively associated.

But in an extensive review of studies on the effects of transparency on trust in local government, Porumbescu (2015b) points out that transparency lacks a consistent relationship to trust in government. Therefore, it seems when measuring the quality of public service, it is not sufficient to look to the macro association between transparency and trust. Moreover, though scholars acknowledge the potential role of transparency and trust on the citizens' perceptions of fairness and justice, the specific form of their potential impact on perceived social equity is yet to be tested. This study explores the relations between government transparency and perceived social equity and the possible moderating effect of trust in government in the link to gain a deeper understanding of those key issues of public service delivery.

## *Defining and Conceptualizing the Key Variables*

*Social equity.* Over the past few decades, social equity has become a unique body of concepts and principles and has taken its place along with efficiency and economy as the "third pillar" of public administration (Frederickson, 2005, 2010). Social equity is rooted in the idea that each person is equal and has inalienable rights (Guy & McCandless, 2012), such as fair access to livelihood, education, and resources and full participation in the political and cultural life of the community. The National Academy of Public Administration's Standing Panel on Social Equality in Governance (2000) defines the term as[AQ3]

> the fair, just and equitable management of all institutions serving the public directly or by contract; the fair, just and equitable distribution of public services and implementation of public policy; and the commitment to promote fairness, justice, and equity in the formation of public policy. (Svara & Brunet, 2005, p. 257)[AQ4]

Many scholars think that the concepts of equality and equity share a common orientation around concepts of fairness and justice. For example, McSherry (2013) notes that "equity" and "equality" are often used interchangeably, and to a large extent, share similar meanings. However, other scholars argue that there is an important, fundamental distinction between equity and equality. Gooden (2015) highlights that in terms of public administration, *equality* means sameness or identical distribution of government services or implementation of public policies, whereas *equity* means the fair or just distribution of such services or policies. Social equity in public administration further recognizes the importance of public servants and public sector organizations in fulfilling the democratic principle of fairness (Gooden, 2015). Social equity is not based on treating all persons or communities the same. Instead, it is giving the same opportunities to all and although there might be an imbalance in who can receive those benefits, it is there for equitable distribution (Maldonado, 2015). The difference is one of nuance: Whereas equality can be converted into a mathematical measure in which equal parts are identical in size or number, equity is a more flexible measure allowing for equivalency while not demanding sameness (Guy & McCandless, 2012; Maldonado, 2015; McSherry, 2013).

*Transparency.* The existing literature on government transparency provides a robust definition that includes sharing substantial and useful information, encouraging citizen involvement, being accountable and open to public scrutiny (Oswald, 2009). In this study, we define transparency as the proactive disclosure of government information, and the availability of

government information upon citizens' request (Rawlins, 2008). Transparency implies the availability of information on matters of public concern, the ability of citizens to participate in political decision, and the accountability of government to public opinion or legal processes. In general, the level of government transparency refers to how willing it is to allow citizens to monitor its performance and to participate in its policy processes, the availability of information about the internal workings or performance of an organization (Grimmelikhuijsen, 2012), and the extent external stakeholders are afforded regular access to information about the operation of their government (Porumbescu, 2015c). Governmental transparency allows the public to develop a more accurate picture of what is happening inside a government (Piotrowski, 2007). This allows the public to evaluate the performance of governmental agencies, hold them accountable, appraise the fairness in public service, and answer concerns pertaining to management of public resources. Previous studies (e.g., Porumbescu, 2015a) have found transparency positively related to citizens' perceptions of government performance. Increasing transparency, which promotes greater understanding about government and government processes, could help to improve citizens' perceptions of social equity. An open government instills confidence that public interest would be taken into account and that citizens would be informed about the trade-offs involved in decision making.

*Citizen trust in government.* Grimmelikhuijsen (2012) finds that confident expectations and a willingness to be vulnerable are critical components of all definitions of trust. Grimmelikhuijsen et al. (2013) argue that positive expectations regarding the intentions and behavior of the object of trust can be thought of as perceptions of the trustworthiness of government. In reviewing various studies on trust in government, they note that they all consider competence, benevolence, and honesty as main dimensions of trustworthiness. In our study, we measure citizen's trust in local government in terms of their perception of the government decision-making quality (competence), political efficacy (benevolence), and government integrity (honesty) as well as their overall trust level in the local government.

## Studies on Transparency and Equity

The three normative democratic values of transparency, trust, and social equity share intertwined meanings. Equity implies the quality of public administration being fair, unbiased, and just (Frederickson, 2010; Wooldridge & Gooden, 2009), whereas transparency is essential if governments want to be recognized as clean, fair, and open. Social equity, reflected through justice and fairness in the delivery of public services, is democracy in action (Wyatt-

Nichol, Brown, & Haynes, 2011). Springer (2014) argues that to deliver public service equitably requires an organizational commitment to delivering results, acting with integrity and transparency, and truly listening and communicating clearly with all stakeholders. To ensure the fairness in citizen rights, including rights for information, it requires the proactive efforts by the government institutions to provide the public with free access of substantial, timely, and useful information about governmental activities, procedures, and policies. Trust depends on citizens' interpretation of what is right and fair and what if unfair (Bouckaert & van de Walle, 2003). Fair and reliable public services and predictable decision making inspire public trust and create a level playing field (Wang & Wan Wart, 2007). Transparency with unfettered communication ensures fairness in government policies, and therefore is heralded as the basis of legitimacy and public support (Fairbanks, Plowman, & Rawlins, 2007).

Although social equity issues have gained greater acceptance in research and practice, some researchers lament that the field of public affairs has been woefully amiss in not addressing issues relating to social equity (Johnson, 2011, p. 169).[AQ5] Gooden and Portillo (2011) also point out that social equity research has grown quite limited in its methodology and scope. More recently, Gooden (2015) examines the social equity scholarship published in *Public Administration Review* (*PAR*) from 1940 to 2013, and finds less than 5% (208) of all articles published in *PAR* since its inception focus on social equity, although there has been a significant increase of articles since 1990s. Apparently, there is an urgent need for further methodological development in social equity research. Gooden (2015) points out that the challenge for future social equity research in Public Administration is to examine broader dimensions of equity and to understand how social inequities in administration can be mitigated.

To our knowledge, few studies have looked into the relationships between public perceptions of transparency and social equity at a local level. As Gooden (2015) notes, decades of *PAR* scholarship on social equity have yielded remarkably few studies that analyze contemporary structural causes of social inequities in the public sector or advance performance management measures that instill real accountability. Studying public sector organizations that have made significant strides in reducing social inequities offers a critical opportunity to develop and test best practices that can be scaled up and replicated (Gooden, 2015, p. 9).

## Context and Background in China

The Chinese government has been using a "Carrot and Stick" tactic for its governance and social control. On one hand, the Chinese government still

maintains a tight control of the media and access of information, particularly the social media with one of the world's most onerous Internet restrictions (Lorentzen, 2013). The Reporter Without Boarder notices that in 2014, the authorities have arrested more journalists than previous years and bloggers, cracked down harder on cyber-dissidents, reinforced online content control and censorship, and stepped up restrictions on the foreign media.[1] The government has built a virtual *Great Firewall* to filter out and block online content it deems undesirable. It has banned some most popular foreign social media, including Facebook, YouTube, Twitter, Google, and Gmail, which the government deems as potential threats to its "cyber sovereignty," and recently blocked Astrill, VPN, and other channels, which many Chinese netizens depended on to circumvent the government' Internet restriction.

On the other hand, to its credit, the Chinese government recently has also acknowledged the need to foster more transparency and has taken some democratic measures to enhance transparency. For example, in 2008, China adopted the *Regulations on Open Government Information* (OGI), which stipulates that governments at all levels "have an affirmative obligation to disclose certain information" that involves the vital interests of citizens. In addition to information that is proactively disclosed by administrative agencies, OGI also stipulates that citizens, legal entities, or other organizations may also request information from relevant government agencies (Piotrowski, Zhang, Lin, & Yu, 2009).

Under the Communist doctrines, equality is supposed to be the utmost goal. Under Communism, all citizens were theoretically equal and the overall distribution of income was fairly equitable. The Communist regimes advocated equal pay and equal opportunities. The booming economy since the economic reform, however, has resulted in a growing gap between haves and have-nots in China. The increasing income inequalities across social classes and cohorts have substantially eroded social equity. The huge gap between the rich and poor and the special privileges those nouveaux riches and government officials enjoy have caused growing public resentment. In 2010 alone, there were 180,000 group protests and unrest in China.[2] Most of them were staged against unfair treatments and injustice. The economic development has not strengthened equality that Communism advocates; instead, it has increased inequity. The lack of transparency in public service has also obstructed realization of social equity.

The Chinese government realizes the problem and has tried to increase social equity through various initiatives to promote government transparency. It is important to ask how effective these initiatives have been. How do the Chinese citizens perceive of equity in a system that promises equality? Although the Chinese government has committed to adopt some transparent measures such as OGI, the question is whether these transparency efforts dissuade the public dissatisfaction and increase their perception of social

equity. How do the citizens' perception of transparency and their trust in government affect their assessment of social equity in China? These are the key research questions to be examined in this article.

# Theoretical Hypotheses

In this study, we theorize that transparency is interrelated with perceived social equity. Social equity emphasizes government's fairness in addressing citizen rights, its responsiveness to the needs of citizens, and its responsibility and accountability, which are all important guarantees for transparency. As explained earlier, fair and reliable public services and predictable decision making inspire public trust and create a level playing field. Transparency with unfettered communication ensures fairness in government policies, and is heralded as the basis of legitimacy and public support. If citizens see government as open and transparent, they would have higher confidence in government; therefore, they are expected to be more likely to view it as fair, legitimate, and equitable. To better understand and explain the relationship, we also introduce citizen trust in government as the moderating variable. We present the theoretical relationships among these three variables in Figure 1.

## *The Relationship Between Transparency and Perceived Social Equity*

Transparency and social equity have become all the more critical now for governments as citizens have become more demanding, critical, skeptical, and cynical. Citizens expect public servants to serve the public interest with transparency, fairness, and justice, and they demand more than just more information to more people (Welch et al., 2005). Citizens also want a more active relationship with their governments. The absence of easily accessible information and timely communication can undermine public trust and fuel suspicions of inequity. Transparency is essential to fulfill governments' commitment to promote fairness, justice, and equity in the formation public policy. Enhanced transparency will help the public's understanding of the local government's operation (Porumbescu, 2015a) and will be positively related to the public's generalized perceptions of public sector performance (Porumbescu, 2015a).

Frederickson (1990) develops the link between social equity and responsiveness to citizens. He insists that government cannot establish social equity without being responsive to citizens in a democratic society (Frederickson, 1990). The concept of open access to information not only involves for the government to divulge and diffuse government information voluntarily or by request but also requires the government to systematically

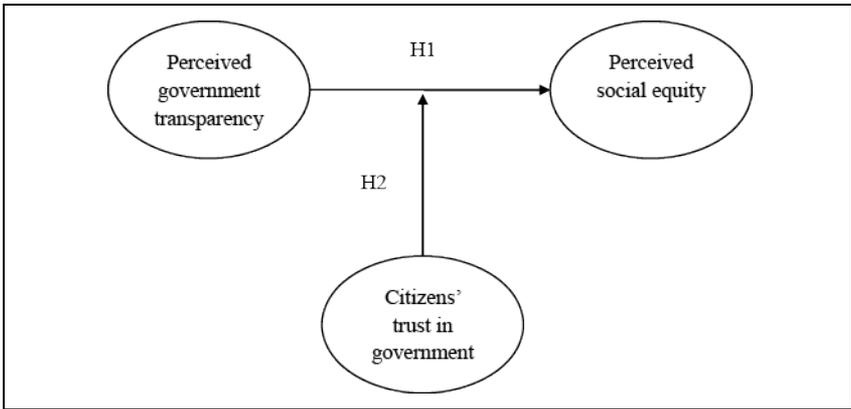seek information from citizens through policy consultations, feedback on



**Figure 1.** Theoretical framework and hypotheses.

service delivery and other means (Rose-Ackerman, 2001). Social equity means social members equally enjoy fair rights to participate in social activities and a fair right to the information regarding government policy making and implementation. Grimmelikhuijsen et al. (2013) find that transparency is proposed as the solution to the citizens' increasing mistrust of government. It will be important to find out to what extent enhanced transparency may also affect the citizens' perceptions of social equity. Based on these theoretical arguments, we test the following hypothesis:

> **Hypothesis 1 (H1):** Citizens who deem government as transparent will perceive a higher level of social equity.

### The Moderating Effect of Citizen Trust in Government on the Transparency–Equity Relationship

To further explore the relationships between transparency and perceived equity, we also explore the possible moderating effect of government trust in the transparency–equity relationship. Porumbescu (2015a) notes that in recent years, there have been numerous initiatives by governments the world over to bolster citizens' perception of government responsiveness, which is an important component of social equity, to foster greater trust in government. The general normative argument is that trust provides an important basis for legitimacy and fosters social equity. Citizens' faith in the government depends on their sense of government's integrity, fairness, and social justice.

Without a solid base of trust in government, social equity would remain elusive (Johnson & Svara, 2011). A plethora of studies has been devoted to the effect of government transparency on citizen trust, and the results are generally mixed (Porumbescu, 2015c). The release of government information via various online channels may help citizens better understand the processes and outcomes of public policies, which boosts citizens' political efficacy and facilitates government trust and social legitimacy (Kim & Lee, 2012; Porumbescu, 2015b). However, some experimental studies also reveal negative relationship between government transparency and citizen trust (de Fine Licht, 2014; Grimmelikhuijsen, 2012; Grimmelikhuijsen et al., 2013). Therefore, results of previous studies have produced inconclusive results regarding the relationship between transparency and trust. Also, some previous studies have looked into the relationship between trust and social equity. For example, Alesina and La Ferrara (2002) find that trust is lower in those with higher income inequality.[AQ6] Yet, one important question remains to be asked: What role can trust play in the relationship between transparency and perceived social equity?

Springer (2014) argues that to deliver public service equitably requires an organizational commitment to delivering results, acting with integrity and transparency, truly listening and communicating clearly with all stakeholders. One of the goals for transparency is to enhance citizen trust in government. On one hand, trust depends on citizens' interpretation of what is right and fair and what if unfair (Bouckaert & van de Walle, 2003). On the other hand, trust is a prerequisite to equitable public service. Equity calls for procedural openness, fairness, and equal access. But the effect of transparency on citizen perceptions of social equity will be contingent on the level of citizen trust in government. If citizens trust government, more transparent government may trigger a weakening or even negative effect on citizen perceptions of social equity, because not all information is positive or favorable for government image. If citizens distrust government, government transparency may help improve government image and citizens may perceive a higher level of social equity. Given the above discussions, we hypothesize the following:

> **Hypothesis 2 (H2):** Citizen trust in government will negatively moderate the relationship between government transparency and citizen perceptions of social equity, and the transparency–equity relationship will be attenuated when the level of citizen trust is relatively high.

## Method

### Sample and Data Sources

Our study focuses on the local governments in China. As Frederickson (2005) points out, all important matters of social equity are local. The results of national policies are all manifested locally. Due to their proximity, local governments are facing even greater challenges in meeting citizens' expectation for transparency and equity. Citizens can discern more closely whether or not their local governments are fulfilling their expectations. If local governments are unable to satisfy their demands, citizens will not only express their discontent with local governments but can also be increasingly dissatisfied with the way democracy works in the entire nation (Weitz-Shapiro, 2008), and lose their trust in government. Therefore, it is important to examine the interaction among transparency, trust, and equity in the local setting.

Studies involving larger samples of governments can generate more holistic and systematic evidence. In this study, we conducted a large-scale telephone survey of randomly selected citizens in 36 major Chinese cities in 2014. These cities include all four municipalities (Beijing, Tianjin, Shanghai, and Chongqing), all 27 capital cities of provinces and autonomous regions, and the rest five sub-provincial cities in China (e.g., Shenzhen, Xiamen, and Dalian). Considering the quality control, time, and budget as well as the representativeness of the sample, we randomly sampled at least 700 citizens in each city. This sample size ensures a small sampling error (<.05) at the 99% confidence interval level, which is a much higher standard for sampling than prior research on this theme. Altogether, the survey collected 25,958 valid responses. We compared our sample with the sixth China national census data, and found it is representative of urban population in terms of gender, age, and other important demographic characteristics.

## Dependent Variables

Social equity is a complicated and multidimensional concept, and it is not easy to operationalize it in empirical studies. The telephone interview method used in the survey did not permit us to ask many questions, and we had to settle with the respondents' perceptions of social equity. In our study, the dependent variable was measured by the citizens' overall perceptions of municipal public service equity by a 11-point Likert-type scale item ("Do you think the delivery of public services in your city is equitable?"), with 0 = *the most unsatisfied* and 10 = *the most satisfied*.

## Independent Variables

Key independent variables used in this study included government transparency and citizen trust. We measured citizens' satisfaction with

government transparency by two 11-point Likert-type scale items. The first was about government information disclosure, and we asked the respondents to rate to what extent the municipal government voluntarily released information. The second was about government responsiveness to citizen information requests, and we asked the respondents to rate to what extent they could easily obtain the information about the government. We believe the two measures capture different aspects of government transparency, with the former focusing on the extent to which government proactively releases information to the public in general and the latter concerning government responsiveness to citizens' requests for information. Given the subtle difference of the two indicators, we separately use them in later analyses. Government transparency can be measured by either objective or subjective indicators, and the two may not converge due to citizens' varying predispositions and perceptual biases (de Fine Licht, 2014). Given the same level of actual transparency, citizens may perceive rather different levels of transparency. In this token, what we are interested in this study is the perceptional variations of transparency and their implications for social equity.

We first measured government trust by a sole 11-point Likert-type scale item, and the respondents were asked to rate to what extent they trusted the municipal government. As government trust is a complicated and multidimensional construct (Grimmelikhuijsen et al., 2013), we also adopted the model developed by previous studies (Grimmelikhuijsen, 2012; Grimmelikhuijsen et al., 2013; Porumbescu, 2015a) to measure citizen's trust in local government in terms of their perception of the government decision-making quality (competence), political efficacy (benevolence), and government integrity (honesty).

We also included the following individual-level perceived variables besides government transparency, individual-level socioeconomic and demographic variables, as well as city-level factors. The respondents were asked to evaluate the scope of public service delivered by municipal government, including public education, health care, housing, public security, infrastructure, environmental protection, job and social security, and public transport. Citizens' perceptions of government decision-making quality, integrity, and responsiveness are included in the model, as they may affect citizens' perceived level of social equity. Citizen's use of media and electronic government, and their life satisfaction were also controlled in the model. To control for the potential effects of individual characteristics, we included gender, age, education level, and income variables in the model. We also controlled for the population size of the cities by the 2010 census and each city's per capita gross domestic product (GDP) using 2013 statistics.

## Analytic Methods

Our data set was multilevel in nature, because citizens were nested in municipalities. Ordinary least square (OLS) regression model is inappropriate herein as it cannot handle the estimation problems arising from multilevel data. Multilevel models (MLMs) can simultaneously model variances at different levels, and it is employed to test our hypotheses. MLMs have not been frequently employed by public administration researchers, although it is very appropriate for complex governance modeling (Heinrich & Lynn, 2001).

The assumptions of OLS (e.g., the error terms are independent and constant) are usually violated by hierarchically structured data, and MLMs should be employed to estimate the equations (Albright & Marinova, 2010). Usually nested individual-level variable is defined at Level 1, whereas cluster level (herein municipality-level) is Level 2. The fixed effects of Level 1 factors may vary across Level 2 units, and random effects of Level 1 factors should be estimated. The variance components at two levels can be estimated, and their relative explanatory power can then be calculated.

It is often recommended by methodologists to center independent variables at Level 1 in MLMs to establish an interpretable zero point for raw metrics, either using centering at the grand mean (CGM) and centering within cluster (CWC) or at the group mean. The decision of centering methods should be based on substantive research questions, and CWC is usually preferable for examining the influence of a variable at Level 1 without interaction terms (Enders & Tofighi, 2007). We were primarily interested in the direct and moderating effects of variables at Level 1, although we also examined those at Level 2. The centering methods were also similar for continuous variables and binary variables at Level 1, but we left binary variables as their raw metrics because centering resulted in severe multicollinearity. We also centered variables at Level 2 by CGM to facilitate interpretation. Random-intercept and fixed-slope models were estimated to interpret the effects of variables at both Level 1 and Level 2, and the models were fitted by maximum likelihood methods.

## Results

### Descriptive Results

The results of this study are consistent with what have been found in previous surveys (Wu, Yu, Lin, Wang, & Tam, 2012). The respondents were most satisfied with the local government's overall service quality (6.55), followed

by the trust in the government (6.45). However, they were dissatisfied with the transparency and participation (see Figure 2).
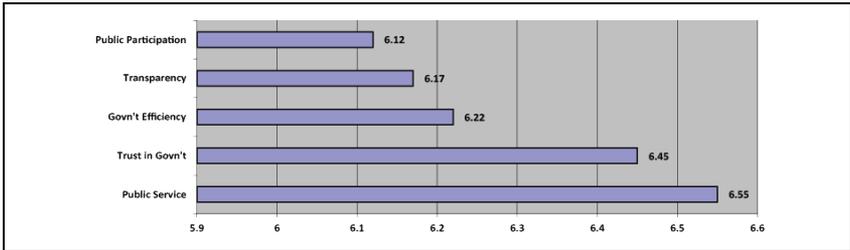


**Figure 2.** Citizens' satisfaction with government performance.

The results show that when asked about their perceived public service equity, more than 67.65% respondents gave 5 or higher from the Likert-type scale of 1 to 10. Only 16.79% gave a score of less than 5. This means that on the whole, citizens perceived a relatively high level of equity in public services of local governments. However, when compared with other dimensions of public service, it was ranked much lower with a mean of only 6.34 (see Figure 3).

Wang (2005) predicts the emergence of a critical generation of citizens born in the post-reform era. He argues that because they grew up in a much more affluent socioeconomic, and a more pluralistic and liberal sociopolitical environment, they should be more inclined toward democratic values and more critical toward the government.[AQ7] Our results partially support that prediction (see Figure 4). The younger the respondents were, the more negative perceptions of equity they held. Those who were born after 1980, when China started the economic reform, held more negative perceptions of equity compared with older generations. One possible reason is that these post-reform generation respondents are under greater pressure in employment and housing. It also suggests that the younger generation is more demanding and critical of the regime. The only exception is the group aged between 18 and 24. They appeared to be the most positive about the social equity. It may be because these youngsters are still in the college and are still under the protective wings of their parents. They may not have much social experience and have not tasted yet the hardship of the real world, such as the pressure to pay for housing, child education, and health care.

The descriptive statistics of the key variables are reported in Table 1.

## MLM Estimates

The MLM estimates support H1, showing statistically significant positive impact of citizens' perception of government transparency on their perception of public service equity even after controlling for other demographic,
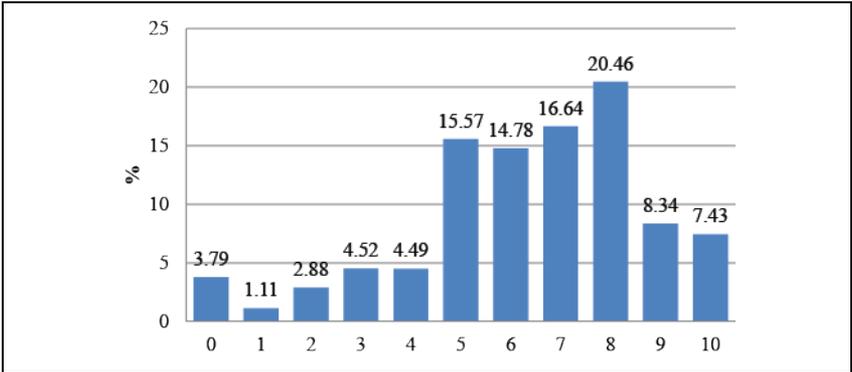


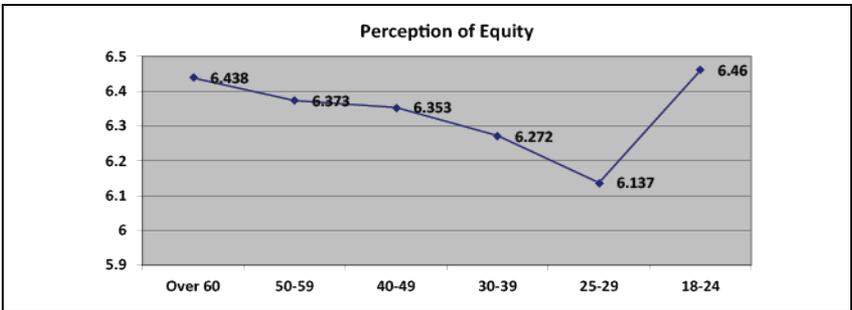**Figure 3.** Citizens' perceptions of public service equity.



**Figure 4.** Citizens' perceptions of public service equity across age groups.

**Table 1.** Descriptive Statistics of Key Variables.

| Variable | $n$ | $M$ | $SD$ | Minimum | Maximum |
|---|---|---|---|---|---|
| Perceived public service equity | 23,243 | 6.344 | 2.377 | 0 | 10 |
| Government information disclosure | 22,407 | 6.132 | 2.512 | 0 | 10 |
| Government information request | 22,587 | 6.203 | 2.450 | 0 | 10 |
| Government trust | 23,192 | 6.453 | 2.380 | 0 | 10 |
| Citizen consulting | 21,833 | 6.150 | 2.532 | 0 | 10 |
| Citizen impact | 21,910 | 6.101 | 2.530 | 0 | 10 |
| Political efficacy (reverse) | 22,790 | 6.240 | 2.517 | 0 | 10 |
| Official media | 25,370 | 0.698 | 0.459 | 0 | 1 |
| E-government use | 25,370 | 0.123 | 0.328 | 0 | 1 |
| Government integrity | 21,804 | 6.126 | 2.530 | 0 | 10 |

| Decision-making quality | 22,402 | 6.521 | 2.348 | 0 | 10 |
|---|---|---|---|---|---|
| E-government use | 24,997 | 1.521 | 0.850 | 1 | 4 |
| Gender (male = 1) | 25,370 | 0.515 | 0.500 | 0 | 1 |
| Age | 25,370 | 3.188 | 1.669 | 1 | 6 |
| Formal education | 22,638 | 2.782 | 1.318 | 1 | 6 |
| Annual family income | 21,681 | 5.656 | 2.298 | 1 | 11 |
| Life satisfaction | 25,024 | 6.695 | 2.204 | 0 | 10 |
| Population size | 36 | 827.681 | 585.170 | 55.942 | 2,884.617 |
| Per capita GDP | 36 | 76,157.290 | 25,303.440 | 42,103.160 | 139,985.500 |

*Note.* GDP = gross domestic product.

economic, and attitudinal factors (see Models 1 and 2). Both government information disclosure and responsiveness to citizens' requests, the two dimensions used in this study to measure government transparency, are positively associated with citizens' perceptions of public service equity (see Table 2). Improved perceptions of local government transparency are statistically related to increased level of perceived social equity. Citizens who believed government was transparent by seeking their views and inputs in policy making perceived a higher level of equity. The results also suggest that citizens who thought government was transparent by proactively releasing relevant information perceived a higher level of equity. Citizen trust in government was also found to be positively related to their assessment of public service equity.

Our study defines transparency with two measures: government's proactive disclosure of information and government's responsiveness to citizens' request for information. To test the moderating effects of trust on the association between transparency and perceived equity, we report the model estimates in Models 3 and 4. The results show that trust does not exert a statistically significant moderating effect on the relationship between government's disclosure of information and citizen perceptions of equity, despite its sign being negative and in line with the expectation of our H2.

However, trust does show a significant moderating effect on the relationship between the second measure of transparency—citizens' evaluation of government's responsiveness to their request for information—and perceived equity. As demonstrated in Figure 5, the magnitude of the effect of transparency on perceptions of equity is shrunk when the value of citizen trust in government is higher, suggesting trust negatively moderates the transparency–equity linkage. This negative and significant interaction effect suggests that the positive effect of transparency on perceived social equity is substantially strengthened when government trust is low. In other words, government transparency may boost perceptions of public service equity to a larger extent when government trust is low. Therefore, H2 is partially supported.

This finding that citizens' trust in government only moderates the relationship between our second transparency measure and perceived social equity provides important empirical evidence to the findings in previous studies (Grimmelikhuijsen, 2012; Porumbescu, 2015c). Thanks to the rapid

**Table 2.** MLM Regression Results of Perceived Public Service Equity.

| Variables | Model 1 Equity | Model 2 Equity | Model 3 Equity | Model 4 Equity |
|---|---|---|---|---|
| Government info disclosure | 0.0632*** (0.009) | | 0.0601*** (0.009) | |
| Government info request | | 0.0672*** (0.009) | | 0.0634*** (0.009) |
| Government trust | | | 0.118*** (0.011) | 0.119*** (0.011) |
| Disclosure × Trust | | | −0.00148 (0.003) | |
| Request × Trust | | | | −0.00799*** (0.003) |
| Citizen consulting | 0.0297*** (0.010) | 0.0348*** (0.010) | 0.0277*** (0.010) | 0.0321*** (0.010) |
| Citizen impact | 0.0290*** (0.010) | 0.0299*** (0.010) | 0.0188* (0.010) | 0.0175* (0.010) |
| Government integrity | 0.125*** (0.009) | 0.123*** (0.009) | 0.0870*** (0.010) | 0.0846*** (0.010) |
| Decision-making quality | 0.383*** (0.009) | 0.373*** (0.009) | 0.346*** (0.010) | 0.335*** (0.010) |
| Political efficacy | −0.0210** (0.009) | −0.0164* (0.008) | −0.0158* (0.009) | −0.0121 (0.008) |
| Official media | 0.0188 (0.045) | 0.0473 (0.045) | 0.0305 (0.045) | 0.0502 (0.046) |
| E-government use | −0.0107 (0.024) | −0.0146 (0.024) | −0.0163 (0.024) | −0.0205 (0.024) |
| Gender (male = 1) | −0.00453 (0.040) | 0.0139 (0.041) | −0.00325 (0.041) | 0.0117 (0.041) |
| Age | −0.00946 (0.013) | −0.0105 (0.013) | −0.0106 (0.013) | −0.0111 (0.013) |
| Formal education | −0.000587 (0.016) | 0.00460 (0.016) | 0.000613 (0.016) | 0.00796 (0.017) |
| Family income | 0.00926 (0.009) | 0.00258 (0.009) | 0.0110 (0.009) | 0.00545 (0.009) |
| Life satisfaction | 0.0817*** (0.009) | 0.0768*** (0.009) | 0.0742*** (0.009) | 0.0692*** (0.009) |
| Population size | −0.0550 (0.080) | −0.0482 (0.078) | −0.0404 (0.077) | −0.0322 (0.074) |
| Per capita GDP | 0.292 (0.182) | 0.266 (0.176) | 0.252 (0.174) | 0.232 (0.168) |
| Constant | 6.353*** (0.057) | 6.365*** (0.055) | 6.356*** (0.054) | 6.377*** (0.052) |
| Variance (Level 2) | 0.101*** (0.027) | 0.0938*** (0.025) | 0.0912*** (0.025) | 0.0830*** (0.023) |
| Variance (Level 1) | 4.200*** (0.058) | 4.217*** (0.058) | 4.102*** (0.058) | 4.100*** (0.058) |
| Log likelihood | −22,716.804 | −22,477.446 | −21,654.463 | −21,407.955 |
| n | 10,615 | 10,494 | 10,175 | 10,061 |
| Level 1 $R^2$ | .250 | .244 | .267 | .264 |

*Note.* Standard errors are in parentheses. The number of groups is 36. MLM = multilevel model; GDP = gross domestic product.
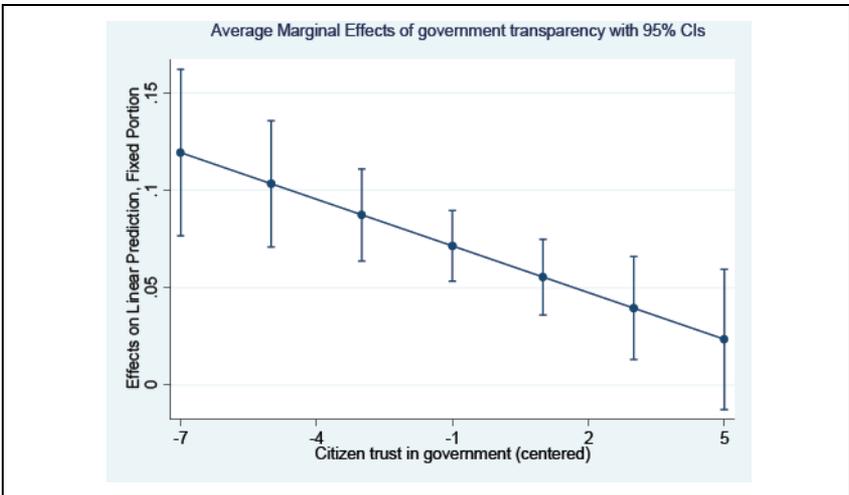*$p < .1$. **$p < .05$. ***$p < .01$.

**Figure 5.** The moderating effect of trust on transparency–equity linkage.

development and diffuse deployment of information technologies, it has become much easier for governments to disclose government information to the public. Although the information is presumed to be pivotal in holding the government accountable to the public, the burgeoning influx of government information, however, may not be automatically accessed and comprehended by citizens due to various technical, socioeconomic, and political reasons. For instance, ordinary citizens may not be interested in reviewing or be professionally proficient in processing mountainous government budgeting and accounting files available online. It is, therefore, important to note that although voluntary and proactive disclosure of information by the government helps enhance transparency, it is the responsiveness to citizens' request of information that matters more in shaping their perceptions of social equity. If the information released by the government is not relevant or customized to citizens' interests and preferences, its relationship with perceived equity may not be substantially changed by government trust.

Our findings also provide further evidence that provision of more information about administration is necessary but does not sufficiently cover the means by which the Internet technology can affect citizens' evaluation of government performance (Welch et al., 2005). These findings are interesting and important. It suggests that transparency means more than just more information to more people (Welch et al., 2005). This can also be one explanation of the extremely low use of government channels including websites for official information. The survey reveals that 69.82% of respondents got the government information through mass media, whereas

only 12.30% got it from the government website. People may not find the information they want through government channels. Government needs to deliver information targeting citizens' needs and requests to be more effective and equitable.

Controlling for other factors, improved perceptions of government responsiveness appear to increase perceived public service equity. The higher citizens' confidence in the government, the higher they perceived the government providing fair and equitable public services. Also, those who trusted that the government was capable of making right decisions for them perceived a higher level of public service equity. Similarly, citizens who believed government officials' integrity also perceived higher social equity. Citizens who perceived a higher level of government's decision quality perceived higher social equity. The same was also true with the citizens who perceived a higher level of government officials' integrity.

Further analysis revealed that political efficacy is an important factor on the level of perceived equity. Citizens who believed their views can influence the government would also show a higher satisfaction level of equity. This is also evident with the statistically strong and positive effect on perceptions of equity when citizens believed they were consulted by the government in policy making. These findings suggest the importance of engaging citizens in the process of democracy to further enhance the transparency of, and citizen confidence in, the government. As Frederickson (1990) points out, if people feel they have some control over their fate and are able to act on the principles of equality, they are happier.

## Discussion

This study provides empirical evidence to support the theoretical argument that the stakeholders who perceive governments are transparent can develop a better sense of social equity. The positive effect of government transparency on perceived public service equity is supported by the MLM estimates. Both government information disclosure and request, the two dimensions of government transparency, are positively and significantly associated with citizens' perceptions of public service equity. As governments and public servants grow more modest in what they might be able to achieve, the public have become more demanding. Transparency and equity require a long-term commitment from established governments. Countries that have a long history of Confucian culture may find it particularly challenging to establish a partnership relationship with their citizens (Kim, 2010), as exemplified by the extremely low use of government information channels by the citizens found in our study.[AQ8]

Frederickson (2005) notes social equity was gaining general acceptance since he first raised the concept in the 1960s. But in practice, social equity

has not gained grounds as other important concepts of public management such as effectiveness and efficiency (Frederickson, 2010). This is partly because "[s]ocial equity is not only difficult to define but difficult to implement" (Springer, 2015).[AQ9] On the government side, social equity imposes challenges to policy makers. Social equity emphasizes responsiveness to the needs of citizens rather than the needs of public organizations. The goal is not just to create a more honest government but also a government whose policies are more responsive to public demands. Moreover, responsiveness requires transparent and open communication, which may leave government more vulnerable to public scrutiny and popular discontent. All these highlight the need for policy makers to change their mind-sets and organizational culture.

On the public side, as Frederickson (1990) points out, they hold contradictory view of social equity. People want an equal chance to become unequal. People recognize that their views are sometimes inconsistent or that they are confused (Frederickson, 1990). Also, equity reflects people's subjective value judgments on such rights and interests whether it is reasonable or not (Ma & Zhu, 2012).[AQ10] Osborne et al. (2002) argues that if the public is happy, if it feels fairly treated, surely that is a form of equity.[AQ11] Yet, what one person thinks is fair may differ markedly from what another thinks is fair due to different moral values as well as environmental considerations (Springer, 2014). Therefore, social equity is a subjective phenomenon, reflected in the "eyes of the beholder" and dependent on perceptions. People who are not used to political power need time to learn how to exercise it responsibly (Rose-Ackerman, 2001).

Out findings are consistent with those from previous studies. Citizens' faith in the government depends on their sense of government's integrity, fairness, and social justice. Without a solid base of trust in government, social equity would remain elusive (Johnson & Svara, 2011; Porumbescu, 2015a).

In this study, we have also theoretically developed and empirically tested the moderating effect of citizen trust in the transparency–equity linkage. The negative moderating effect of citizen trust suggests that government transparency plays a more profound role in boosting perceived social equity particularly when citizens place relatively lower trust in government. When citizens highly trust government, the positive effect of government transparency on perceived social equity is largely attenuated. Our findings also support Frederickson's (1990) argument that government cannot establish social equity without being responsive to citizens' needs.

We hope these findings could provide some empirical evidence to the future study of social equity.

## Policy Implications

One important finding of this study is citizens' low satisfaction with transparency in China. As citizens have become more discerning and demanding, policy makers should address the issue of consistently low satisfaction with transparency to improve citizens' perception of equity. It is also important for policy makers to realize that the critical aspect of transparency relates not just divulging more information to more people. As our study shows, it is the responsiveness to citizens' request of information that matters more in shaping public perceptions of social equity. Policy makers should understand the citizens' need to provide relevant information. The way in which government information is offered to the public is also important. For instance, transparency also implies that information is disclosed in a timely manner and presented in an understandable format. The critical aspect of transparency in policy making relates not to the policy itself. More efforts should be put in making visible the process of policy making to allow the public to assess why the policy outcome is the way it is (Grimmelikhuijsen et al., 2013).

Our study shows that providing access to government information to the public is only part of the solution. In countries with a large, dispersed, low-income population, more is needed than a system that facilitates elite access and monitoring. Governments need to consider policies that both encourage organizational activity at the local level and provide people with information and protection to participate in a meaningful way. In sum, government should not just provide more information to more people but also proactively engage citizens in the process to enhance public service equity. The government should also be more responsive to the citizens' needs for information to enhance their perception of equity.

## Limitations and Future Research Avenues

Several limitations to this research should be noted, and future studies can be done to address these limitations. First, the relationships between transparency and perceived equity and the role of trust in the relationship are too complex to be exhausted in this study. All these variables are multilayered, multifaceted, and contextual concepts that comprise a range of attributes. The study is limited by using perceptions-based measurements that cannot detect the diverse aspects of these variables. Also, we only measured the perception of social equity by a single survey item. As it is more sensitive to measurement error than multiple-item measures, the results associated with perceived social equity should be interpreted cautiously. We suggest that future studies use multiple items to broadly and comprehensively capture public perceptions of equity. Also, the measures used here are perceptual

outcomes rather than objective processes, and it will be helpful to measure objective performance to compare with public perceptions in future studies. Future research also needs to explore more on government's trust in citizens, which has been less studied than the other way around (i.e., citizen trust in government).

Second, as revealed in prior studies (Grimmelikhuijsen et al., 2013), the relationship among these variables is culturally dependent. We only look into one country here. Future studies could explore other cultural factors and conduct cross-cultural comparisons. Although we controlled for the size of the city and economic development, we need to look to other cultural factors, especially with a vast and culturally diversified country such as China.

Third, the relationships among perceptions of equity, transparency, and trust may be mediated by other factors, which were not controlled in this study. Furthermore, more research would be required to determine with more precision the magnitudes and directions of these relationships.

Finally, this study only includes urban residents in large cities in the survey, and future studies should include rural residents in medium and small cities to compare regional differences. Although China has witnessed a rapid urbanization process, about half of the population still resides in rural areas. There have been growing disparities in rural and urban development, which is very likely to lead to different perceptions of public service equity. Future studies should include rural residents and compare their perceptions with those of urban citizens.

## Declaration of Conflicting Interests

## Funding

## Notes

1. See https://rsf.org/en/world-press-freedom-index-2014.[AQ12]
2. See http://politics.caijing.com.cn/2011-09-26/110874896.html

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