Panel T06P02 Session 1

Policy Implementation - The Role of Policy Targets

Heterogeneous Targets and Compliance: The Mediating Roles of Policy Ambiguity and Conflict

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Abstract
This article explores the mechanisms underlying compliance variations across heterogeneous targets in the context of China’s Corporate Employee Pension policies. Ascribing to the Ambiguity-Conflict Model of implementation, this study suggests that the perceptions of ambiguity and conflict of a policy mediate the relationship between targets heterogeneity and compliance. Using data from 2,823 firms listed in China’s A-stock Market from 2008 to 2015, this article tests the model regarding the mandatory Basic Pension policy and the non-mandatory Enterprise Annuity policy. The results demonstrate distinct mechanisms across positive and negative compliance. Specially, both ambiguity and conflict play the mediating roles for negative compliance, while only ambiguity plays the mediating role for positive compliance. This article contributes to compliance and implementation literature by developing and testing the ambiguity-conflict based mechanism linking targets heterogeneity and compliance.

Keywords
Compliance; Heterogeneity; Policy Targets; Ambiguity-Conflict

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INTRODUCTION

Most public policies aim at changing targets’ behaviors. Therefore, successful implementation of a policy requires compliance from targets (Gofen 2015). Accordingly, there are substantial studies on why targets do or do not comply with public policies. These studies split into three major schools: top-down, bottom-up and interaction.

Top-down models see policy makers and implementers as the central actors and concentrate on approaches during policy design and implementation stages to increase targets’ compliance. May (2004) and Tyler (2006) indicate that governmental and policy legitimacy influences compliance. Fisclein and Smith (2013) suggest preventive ways during policy design stage. Deery (2000) posits that policy design should ensure targets’ capacity to comply. Schneider and Ingram (1990) identify five types of tools to increase compliance: authority, incentives, capacity building, symbolic and hortatory, and learning. Porter and Roint (2006) see incentives and information as the main mechanisms of governmental enforcement efforts. Although Short and Toffel (2008) find correlation between an enforcement system and compliance, Parker and Nielsen (2011) report that sanction severity does not matter, but that detection frequency matters. Further, Galle (2017) reveals that compliance is not correlated with enforcement intensity, but correlated with firm culture and professional advice.

that the perceived effectiveness and trustworthiness of the government significantly affect compliance. Similarly, Braithwaite (1995) argues that the sense of identity with the regulator and the regulation itself is an important factor. Winter and May (2001) distinguish between three types of motivations: economic calculative motivations, social motivations and normative motivations, while Weaver (2014) identifies eight compliance barriers which can be divided into three categories, namely external perceived incentives, willingness and capacity to comply. Wu et al. (2017) suggest an integrated approach including instrumental, procedural and collective perspectives. Etienne (2011) provides a goal framing approach to account for the multiple motivations to comply. Additional factors influencing targets’ decisions on compliance are also well documented. They are targets’ interpretation of policy (Gofen 2015; Weaver 2014), firm culture and professional advisors (Galle 2017), heterogeneity of targets (Weaver 2014; Guo and Zhou 2017) and targets’ awareness and capacity (Winter and May 2001).

Interaction models emphasize interaction between targets and policy makers as well as implementers. Compliance is such a complex process that neither top-down nor bottom-up models can explain it solely. Gillad (2014) suggests that the line between compliance and noncompliance is not always very clear and compliance is co-constructed by regulatory agencies and target organizations. Yee et al. (2016) provide evidence that enterprises’ perceptions of the regulators’ actions and gestures drive their compliance behaviors. Also, some degree of noncompliance is acceptable (Edwards 2006), and government may adapt policy to encourage compliance rather than enforce implementation (Gofen and Needham 2015). Further, policy makers may take on one of four patterns of legitimization, namely legitimization, reluctant legitimization, implicit legitimization and delegitimization, to response to noncompliance (Gofen 2015). Moreover, responsive regulation suggests cooperation between policy targets and regulators (Ayres and Braithwaite 1992), while co-production regards policy targets as co-producers (Alford 2002).

The emerging literature has improved the understanding of compliance, yet it is limited in two ways. First, an integrated framework, which incorporates the perspectives of top-down, bottom-up and interaction, is required. Second, the mechanisms linking heterogeneity and compliance remain unexplored. To allow a more nuanced understanding of compliance, this study focuses on the mediating roles of policy ambiguity and conflict on the relationship between targets heterogeneity and
two types of compliance. In particular, using a sample of 18,243 firm-year observations, this study tests the ambiguity-conflict based indirect effects linking ownership and compliance with Corporate Employee Pension (CEP) policies in China.

This research contributes to compliance and implementation literature. First, drawing on the Ambiguity-Conflict Model (ACM, Matland 1995) of policy implementation, this article provides an integrated framework of compliance and uncovers the mechanisms linking heterogeneity and compliance. This study suggests that heterogeneous targets perceive varied ambiguity-conflict of a policy, which in turn explains compliance variations. The ambiguity-conflict based mediation model incorporates three major perspectives of compliance, top-down, bottom-up and interaction, by synthesizing policy attributes (ambiguity and conflict), implementation (the ACM) and targets (heterogeneity). Further, this study simultaneously tests two mediators, ambiguity and conflict. Thus, we could assess their relative strength for a particular policy. This research also examines the model across two policies regarding positive and negative compliance. To the extent that mediation mechanisms vary across the two types of compliance, including both provides the opportunity to uncover the distinct mechanisms. Second, this article contributes to implementation literature by extending the ACM. Implementation scholars give less attention to compliance variations across heterogeneous targets regarding a particular policy. This study adds to implementation literature by building the linkage between targets heterogeneity, ambiguity-conflict of a policy and compliance.

This article proceeds as follows. The first section develops the ambiguity-conflict based model for compliance and proposes hypotheses. The second section introduces China’s CEP policies and compliance variations across ownership. After explaining the data, variables and methodology, the rest sections present the empirical results, discussions and conclusions.

**TARGETS HETEROGENEITY, POLICY AMBIGUITY-CONFLICT AND COMPLIANCE**

The ACM provides a reasonable framework to study policy implementation. Based on a policy’s ambiguity and conflict level, a two-by-two matrix (Figure 1) is created and four implementation paradigms as well as corresponding determinants are identified.
With low ambiguity and low conflict, administrative implementation is identified and outcomes are determined by resources. With low ambiguity and high conflict, political implementation is identified and outcomes are decided by power. With high ambiguity and low conflict, experimental implementation is identified and contextual conditions dominate the process. With high ambiguity and high conflict, symbolic implementation is identified and local level coalitional strength determines the outcome.

When targets are homogeneous, any individual \( i \) and \( j \) perceive the same levels of ambiguity and conflict, so the policy is positioned at the only location in the ambiguity-conflict matrix. As a result, the same implementation paradigm involves no compliance difference between \( i \) and \( j \) if determinants are given. When targets are heterogeneous, they perceive different levels of ambiguity and conflict, so the same policy is positioned at varied locations in the matrix. Given determinants, there are three scenarios.

Figure 1. Ambiguity-Conflict Matrix

![Ambiguity-Conflict Matrix Diagram]

(1) \( i \) and \( j_1 \) (Figure 1) perceive different levels of ambiguity and same levels of conflict. For this situation, high ambiguity diversifies interpretations of a policy, therefore decreases the level of compliance.

(2) \( i \) and \( j_2 \) (Figure 1) perceive different levels of conflict and same levels of ambiguity. For this situation, high conflict increases compliance costs, therefore
decreases the level of compliance.

(3) $i$ and $j_3$ (Figure 1) perceive different levels of both ambiguity and conflict. For this situation, one of four types of implementation is identified according to the relative distance between $i$ and $j$ in the matrix, and so implementation determines the level of compliance. At one extreme, with administrative implementation, policy goals and means are clear as well as compliance costs are low, so the level of compliance is the highest. At the other extreme, the level of compliance is the lowest with symbolic implementation. With political implementation or experimental implementation, the level of compliance falls in the middle.

Therefore, the following hypotheses are developed:

H1: Targets’ perceptions of policy ambiguity mediate the relationship between their heterogeneity and compliance levels.

H2: Targets’ perceptions of policy conflict mediate the relationship between their heterogeneity and compliance levels.

Figure 2. Conceptual Model of the Mediation Effect of Ambiguity-Conflict

CHINA’S CEP POLICIES

Testing these ambiguity-conflict based hypotheses requires, first, a policy area in which compliance variations across a particular characteristic of targets exist, and second, data on compliance, ambiguity and conflict. China’ CEP policies meet both requirements. Ownership splits China’s firms into state-owned enterprises (SOEs) and non-state-owned enterprises (nSOEs), between whom great compliance gap in CEP policies has long existed (Guo and Zhou 2017). In addition, data on compliance, ambiguity, conflict and other factors related to corporate compliance come from the
China Stock Market & Accounting Research (CSMAR) dataset, which contains extensive information about each firm. Thus, CEP policies provide a useful and appropriate forum for testing these hypotheses.

This study focuses on CEP policies: the mandatory Basic Pension (BP) policy and the non-mandatory Enterprise Annuity (EA) policy. The choice of these two policies reflects several considerations. First, we could test the mediating mechanisms for the whole CEP policies, which consist of the two policies. Second, we could test the robustness of the mechanisms through two types of policies and compliance, namely positive compliance with non-mandatory policy and negative compliance with mandatory policy. And third, we could capture distinct mechanisms across two types of policies and compliance.

BP policy requires employers’ contributions in accordance with the regulated payroll base and rate, while EA policy encourages employers’ contributions with the regulated cap. Although employers have traditionally attempted to circumvent the two policies owing to financial burden (Nyland et al. 2006, 2011), which generally accounts for 20% of the payroll, ownership impacts employers’ perceptions of policy ambiguity and conflict through the motivations, obstacles and resources to comply with CEP policies. SOEs have more motivations to comply with the two policies. Governments set up SOEs for the sake of economy as well as politics and society. For example, SOEs have had to take on their contribution obligations in order to alleviate the political and social pressure on governments when employees were cut massively in the 1990s reform. Further, managers of SOEs, who are cadres rather than professional managers in market, look after political promotion by complying with the policies.

SOEs face fewer obstacles to comply as well as more obstacles to non-comply with the two policies. Under the principal-agent framework, managers and employees of SOEs, as agents, share the firm residual through complying with the policies even the compliance adds to the operating cost while governments, as principals, cannot control SOEs actually. From the view of soft budget constraint, managers of SOEs which bear social burdens can attribute firm loss to compliance with CEP policies, so governments cannot ensure accountability. With the tournament model, managers of SOEs are confronted with political punishment because noncompliance means disloyalty to their superiors. Nevertheless, managers of nSOEs try to cut costs for the sake of owners in order to be rewarded in the managers market.
SOEs possess more resources to comply with the two policies. SOEs in China are more likely to capture scarce resources, such as land, credit and entrance to monopoly industry, so they are more profitable and capable of compliance.

In summary, SOEs perceive lower levels of ambiguity and conflict of CEP policies because of the variations regarding the motivation, obstacles and resources to comply across ownership. In turn, lower perceptions of policy ambiguity-conflict explain higher compliance the CEP policies.

RESEARCH DESIGN

Sample

The sample for this study was drawn from the firms listed in China’s A-stock Market from 2008 to 2015. The sample is attractive because these firms were required, by law, to annually report the information on CEP policies compliance and other related factors. Thus the reported information was relatively complete and reliable. The study period was 2008-2015. The study period starts in 2008 because compliance data were unavailable in prior years. The study period ends in 2015 because that was the year when the study began. The initial sample comprised 18,243 observations of 2823 firms. Then 4,296 observations were removed for compliance data missing, 172 for heterogeneity, 558 for ambiguity, 61 for conflict, 530 for controllers, and subsequently, 12,626 observations for BP policy as well as 2,884 observations for EA policy were kept.

Variables

The dependent variable, **BP policy compliance**, was the ratio of contribution to BP of the current year to total wages of the prior year. Another dependent variable, **EA policy compliance**, was the ratio of contribution to EA of the current year to total wages of the prior year. Higher ratios reflected higher compliance. The independent variable, **heterogeneity**, was a dummy, 1 = stated-owned.

The mediator, **ambiguity**, was the opposite number of the ratio of contribution to Housing Benefits Program of the current year to total wages of the prior year, and higher values indicated higher levels of perceived ambiguity. Another mediator, **conflict**, was the average pay (in logs) of the current year, and higher values indicated higher levels of perceived conflict.

Firms’ characteristics were controlled. Return on assets, ratio of price to earnings,
ratio of cash to revenue, ratio of liabilities to assets, ratio of assets to revenue, and number of employees (in logs) were included (Yoshida and Horida 2012). Year and area effects were also controlled.

Analysis

This study aims to test the mediating roles of policy ambiguity and conflict on the relationship between targets heterogeneity and compliance. In order to examine the two mediators simultaneously, structural equation modelling (SEM) was initially utilized to estimate the path coefficients, and then the bootstrapping technique was used to create confidence intervals (CIs) for assessing the significance of the mediation effects. For robustness consideration and capturing distinct mechanisms across two types of compliance, both BP and EA policies were studied.

RESULTS

BP Policy

Table 1 displays descriptive statistics and a correlation matrix for core variables regarding BP policy.

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. heterogeneity</td>
<td>0.4930</td>
<td>0.5000</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ambiguity</td>
<td>-0.0631</td>
<td>0.0533</td>
<td>-0.4105***</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. conflict</td>
<td>11.0432</td>
<td>0.6331</td>
<td>0.0523***</td>
<td>-0.0945***</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>4. compliance</td>
<td>0.1350</td>
<td>0.0773</td>
<td>0.3112***</td>
<td>-0.5996***</td>
<td>-0.1559***</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

n=12,626 firm years.

*** p < 0.01

The two mediation hypotheses (H1 and H2) suggest that targets heterogeneity affects compliance through their perceptions of ambiguity and conflict of BP policy. Figure 3 presents the visual representation of the SEM results. Regarding the relationships between the independent variable and the mediators, heterogeneity is significantly related to both mediators: ambiguity ($\beta = -0.4105$, $p < 0.01$) and conflict ($\beta = 0.0523$, $p < 0.01$). For the relationships between each mediator and the dependent variable, both are significantly related to BP policy compliance: ambiguity ($\beta = -0.5686$, $p <$
0.01) and conflict (β = -0.1654, p < 0.01). Finally, the direct effect of heterogeneity on policy compliance is also significant (β = 0.0233, p < 0.01).

Table 2 reports the results for significance test of each indirect effect via bootstrapping procedures that create a 95% CI around the indirect effect estimate. CIs that do not include 0 reflect significant indirect effects for that mediator. The results show that the two indirect effects, heterogeneity-ambiguity-compliance and heterogeneity-conflict-compliance, are both significant.

In all, the results support that BP policy ambiguity-conflict mediates the relationship between targets heterogeneity and compliance (H1 and H2).

Figure 3. SEM Results for BP policy

![Figure 3. SEM Results for BP policy](image)

Table 2. Indirect Effects and Bootstrapping Results for BP policy

<table>
<thead>
<tr>
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<th>Indirect Effect</th>
<th>95%CI</th>
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<tr>
<td></td>
<td></td>
<td>Lower</td>
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<tr>
<td>Ambiguity</td>
<td>0.0357</td>
<td>0.0328</td>
</tr>
<tr>
<td>Conflict</td>
<td>-0.0013</td>
<td>-0.0018</td>
</tr>
</tbody>
</table>

Based on 2,000 bootstrap samples.

EA Policy

Table 3 displays descriptive statistics and a correlation matrix for core variables regarding EA policy.

Table 3. Descriptive Statistics and Correlation Table for EA Policy

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
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The two mediation hypotheses (H1 and H2) suggest that targets heterogeneity affects compliance through their perceptions of ambiguity and conflict of EA policy. Figure 4 presents the visual representation of the SEM results, and Table 4 reports the results for bootstrapping test of each indirect effect. Figure 4 shows that heterogeneity is significantly related to ambiguity ($\beta = -0.2583, p < 0.01$), and ambiguity is significantly related to compliance ($\beta = -0.4416, p < 0.01$). Yet heterogeneity is significantly related to conflict ($\beta = 0.0843, p < 0.01$), and conflict is insignificantly related to compliance ($\beta = -0.0462, p > 0.1$). Finally, the direct effect of heterogeneity on policy compliance is significant ($\beta = 0.1531, p < 0.01$). Table 4 shows that the indirect effect through conflict is not significant, but the indirect effect through ambiguity is significant.

In all, the results support that only EA policy conflict mediates the relationship between targets heterogeneity and compliance (H2).

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<tr>
<td>n=2,884 firm years.</td>
<td></td>
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<tr>
<td>*** $p &lt; 0.01$</td>
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1. heterogeneity 0.8564 0.3507 1.0000
2. ambiguity -0.0898 0.0605 -0.2583*** 1.0000
3. conflict 11.2363 0.6745 0.0843*** -0.0499*** 1.0000
4. compliance 0.0307 0.0332 0.2545*** -0.4858*** 0.0667*** 1.0000

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Figure 4. SEM Results for EA policy

Table 4. Indirect Effects and Bootstrapping Results for EA policy

95%CI
DISCUSSION AND CONCLUSION

This article applies the ACM to link heterogeneous targets and compliance in the context of China’s CEP policies. Examining both BP and EA policies, this study finds that the perceptions of ambiguity and conflict of a policy mediates the relationship between targets heterogeneity and compliance. This research also provides evidence of distinct mechanisms across positive and negative compliance. Specially, both ambiguity and conflict play the mediating roles for negative compliance, while only ambiguity plays the mediating role for positive compliance. These findings support that the perceptions of ambiguity and conflict of a policy are an important mechanism linking targets heterogeneity and compliance.

This article contributes to compliance and implementation literature. First, it contributes to the compliance literature by developing and testing the ambiguity-conflict based mechanisms linking targets heterogeneity and compliance. Although the emerging literature has developed deferent theoretical perspectives to explain compliance variations across heterogeneous targets, prior studies have not explicitly tested the mechanisms linking heterogeneity and compliance through an integrated framework. This study suggests that heterogeneous targets perceive varied ambiguity-conflict of a policy, which in turn explains compliance variations. The ambiguity-conflict based mediation model incorporates three major perspectives of compliance, top-down, bottom-up and interaction, by synthesizing policy attributes (ambiguity and conflict), implementation (the ACM) and targets (heterogeneity). This research examines the model across two policies, testing robustness and capturing distinct mechanisms across positive and negative compliance. Second, this article contributes to implementation literature by extending the ACM. Matland develops the ACM to synthesize the top-down and bottom-up literature on implementation. Implementation scholars largely focus on different implementation paradigms based on the level of ambiguity-conflict of a particular policy, but give less attention to compliance variations across heterogeneous targets regarding a particular policy. This
study adds to implementation literature by building the linkage between targets heterogeneity, ambiguity-conflict of a policy and compliance.

This article also suggests important policy implications. It provides valuable information on the relationship between the perceptions of ambiguity and conflict of a policy and compliance. Policy makers and implementers, who look to increase compliance, can not only predict compliance level, but also more importantly make targeted intervention.

A few limitations merit further discussions, because they point toward future research directions. First, although this study develops and tests an ambiguity-conflict based model to explain compliance, there are additional theories that may also be relevant. For example, it is suggested that there may be targets heterogeneity in compliance postures (Braithwaite 1995) as well as in willingness and capacity to comply (Alford and Speed 2006). Consequently, posture may mediate the relationship between heterogeneity and compliance. Similarly, willingness-capacity is an alternative mediation mechanism. Thus compliance researchers could benefit from considering other competing theoretical perspectives. Second, the empirical analysis of this article focuses on compliance variations across ownership regarding China’s CEP policies, and then the natural extension of this study would be to further explore other targets characteristics, policies and countries. And third, although measuring ambiguity and conflict follows the theories and related literature, the possibility remains that there are operational alternatives of the two mediators. Future research should examine whether the results are robust across different measures of mediators.

Understanding compliance is an important part of understanding public policy. The present theoretical rationale and empirical findings help extend and enrich theory showing that perceiving ambiguity-conflict of a policy is an important mechanism for linking heterogeneity and compliance. This research also provides evidence of distinct mechanisms across positive and negative compliance. It is hoped that the theory and findings reported here spur further theoretical and empirical attention toward a better understanding of compliance.
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