# ARTICLE

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Social stability risk assessment and economic competitiveness in China

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Social stability risk assessment (SSRA) has become the mainstream policy instrument for assessing potential risks of large-scale development projects across all sectors in China. In this paper, fuzzy qualitative comparative analysis (fsQCA) is used to quantify the impact of SSRA policy on economic competitiveness across China's 31 provinces using a SSRA policy dataset (2003–2020) and a provincial economic competitiveness dataset (2019–2020). QCA combines Boolean algebra and set theory to identify configurations of conditions that are necessary or sufficient for a given outcome. Rather than following the mainstream statistical method of developing a single causal model that best fits the data, QCA explores multiple concurrent causality. A typology of SSRA policies was developed to guide our analysis. The research concluded that to support high economic competitiveness within provinces, SSRA policies must be structured around solving social stability problems and addressing a specific industry issue (e.g., pollution) in a particular industry (e.g., resources). Policies that only include one of these factors or that focus on the performance of government officials were found to contribute to low economic competitiveness. Reorienting the focus of SSRA policies could support more rigorous risk assessments and enhance economic competitiveness, particularly in provinces that host large-scale development projects. These findings have implications for China's policymakers given their dual objectives of driving economic reform while maintaining a harmonious society.

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Introduction

Since it came to power in 1978, China's reform leadership has embarked on a programme of rapid economic development, delivering an average annual growth rate of 12.53% from 1980 to 2018, making China's the fastest growing late-developing economy (Chinese Academy of Social Sciences, 2018; Meier, 2009). At 18.62%, the capital growth rate from 2008 to 2018 is even more impressive, contributing up to 115.53% in economic growth. Knight and Ding attribute these remarkable outcomes to three key factors: the low economic starting point, radical structural change across multiple sectors, and rapid capital accumulation (Knight, Ding, 2012). Figure 1 illustrates the significant increase in the contribution rate of capital elements to economic growth over this period.

The state has played an active role in China's economic transformation, adopting a hybrid of state and market controls that is uniquely described as a 'guided' market economy (Meier, 2009). The state has used industrial policy to accelerate and drive economic development, focusing on export-oriented industrialisation, direct foreign investment and encouraging entrepreneurialism across its industrial sectors and businesses. With its extremely inefficient and unprofitable state-owned enterprises threatening economic growth, state revenue and investment, the leadership began a radical structural overhaul in the late 1990s, which led to millions of workers being made redundant without financial assistance. At the same time, the East Asian financial crisis prompted China to undertake further economic and financial reforms aligned with market-centred capitalism (Meier, 2009). A decade later, the country's exports fell by 40% in the wake of the global economic recession, resulting in rampant unemployment. The government responded by launching a large-scale economic stimulus plan, underpinned by a major infrastructure programme, the Belt and Road Initiative (BRI), that included dams, high-speed rail, highways and airport projects funded by the central and local governments (Chinese Academy of Social Sciences, 2018; Knight & Ding, 2012; Knight, 2013). To make way for these massive infrastructure projects, land and property were confiscated, housing was demolished, and millions of people were relocated without access to equivalent livelihoods, adequate compensation or support (Meier, 2009; Peng et al., 2019).

In 2012, China commenced a nation-wide roll out of provincially managed social stability risk assessment (SSRA) policies (NDRC, 2012). At the national level, SSRA policy aims to "promote scientific, democratic and legal decision-making,

prevent social contradictions, and standardise the SSRA of major fixed assets investment projects" (NDRC, 2012, p1). Prior to project approval, the policy requires that a SSRA be undertaken to identify and investigate social stability risks and that evidence is provided that the risks have been mitigated. The policy allows for assessors (government agencies, private companies or consultants) to determine the potential for social instability to arise using questionnaires, in-depth interviews, and stakeholder engagement. In SSRA, 'low risk' is defined as the risk level acceptable to the local government and the project developer; that is, the maximum cost (including 'economic cost' and 'administrative responsibility') that the project developer and the local government will accept in order to resolve the conditions of risk (Peng et al., 2019). Note the directionality of the risk: internal rather than external towards project-impacted people. 'Economic cost' is the financial loss to the project developer and local government. If the risk leads to a substantial increase in investment costs or a substantial decrease in revenue, these losses will exceed acceptable risk (high or medium risk), leading the project developer to suspend or terminate the project. If the risk leads to a small increase in investment cost or a minor decrease in revenue, it would be considered 'low risk'. 'Administrative responsibility' refers to the administrative cost that the local government would bear in addition to the economic cost. If key local government leaders are held responsible for adverse impacts, it is defined as an unacceptable risk (high or medium risk). If the direct administrative person is held responsible, the local government considers it low risk. In China, the powers and responsibilities of the administrative officials are well established. The lower-level officials (direct administration staff) bear less responsibility and, therefore, their loss to the administration (through being held accountable for adverse impacts) is considered to be less significant than the loss of the key local government leaders.

SSRA policy was introduced to guide the identification and mitigation of social stability risks and the ensuing risks to China's economic competitiveness. This paper aims to assess the relationship between SSRA policies and economic competitiveness across the provinces and to determine whether the policies have achieved their objectives (see Fig. 2). The paper contributes a new typology of SSRA policies to the risk assessment literature and extends the limited research on SSRA. We are unaware of any other quantitative analysis that explores the impacts of public policy on China's provincial economic competitiveness.

We adopt the World Economic Forum's definition of economic competitiveness; that is: "the set of institutions, policies and factors that determine the level of productivity of a country" to guide our analysis (Cann, 2017). We consider economic competitiveness to be an aggregate indicator rather than a single event, and measures can include a country's capacity for trade and its ability to create welfare. Regional institutional and policy endowment can strongly influence economic development and competitiveness, although the success of these types of interventions varies across locations and is tempered by contextual factors (Maskell, 1998; Bailey et al., 2006; Mulatu, 2016). In this paper we apply qualitative comparative analysis (QCA) to determine which SSRA policies enhance provincial economic competitiveness and which of them deliver low economic competitiveness.

Four sections follow this introduction. Section 'Research context' introduces research context. Section 'Methods' explains data sources and explains qualitative comparative analysis method. Section 'Results' presents results of the analysis. Section 'Discussion and conclusion' discusses implications for China's policymakers.
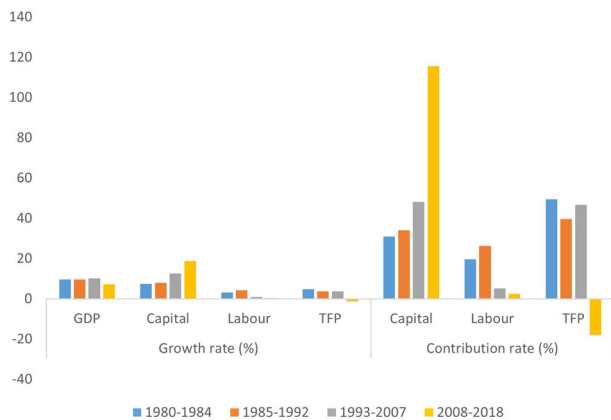

Fig. 1 Factor input and contribution rate in China from 1980–2018. TFP: total factor productivity. Source: Over the past 40 years: government led investment has become the main driving force of economic growth (Chinese Academy of Social Sciences, 2018).
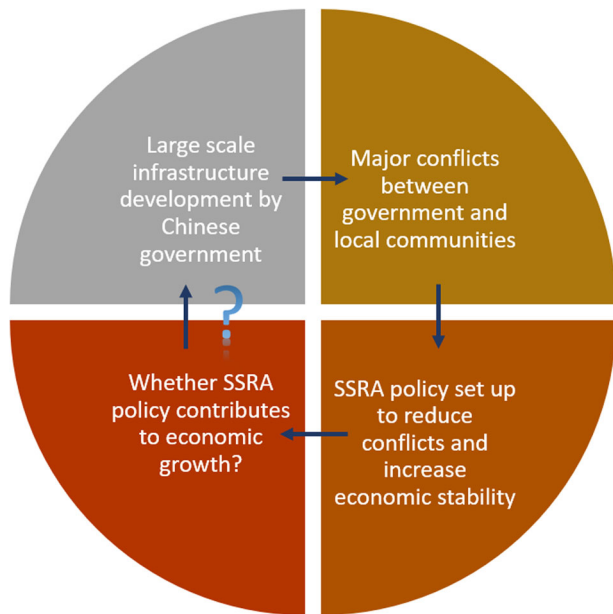
Fig. 2 Research logic identifying the research question for this study. The arrow shows the development process of SSRA policy. The question mark illustrates the core issue of our research.

Research context

The social cost of China's reforms and rapid growth has been enormous. Income inequality increased sharply from the early 1980s, resulting in China becoming one of the most inequitable countries in the world, with inequality occurring among households, across regions and between urban and rural areas (Knight, 2017). The pervasiveness of rent seeking, corruption and regulatory capture have exacerbated income inequality. At the local level, governments levy excessive taxation and fail to address widespread pollution. There is also inequality of opportunity, for example, across employment, education, financial services and insurance coverage (Yuji, 2009; Wang, 2015; Zhou and Song 2016). Hu and Hu found that 91% of Chinese people are concerned about the widening income gap between the rich and poor, and that 80% of them consider the widening gap "completely unacceptable" (Hu and Hu, 2007). Their primary issue relates to unfair social distribution of wealth and opportunity. According to World Bank standards, a Gini coefficient of 0.6 signifies that a country's economic and social stability is at risk (Ren, 2011). China's Gini Coefficient is 0.5 (China Academy of Social Sciences, 2018), heading towards that threshold. To improve the country's performance against this economic indicator, Jain-Chandra et al. advocate fiscal policy reforms, including tax changes, social protection spending and redistribution of wealth (Jain-Chandra et al., 2018).

By the early 2000s, this widespread inequity had begun to manifest in social unrest, such as cross-level and group petitions and demonstrations. In 2004, 100,000 peasants in Hanyuan County, Sichuan Province, were forcibly removed from their land when more than 2900 hectares of farmland near the Dadu River were flooded to make way for the Pubugou Hydropower Station. The interests of the affected people were ignored. They were not consulted about construction of the power station, the resettlement compensation process was far from transparent, and officials and businesspeople colluded in corrupt deals at the expense of the dispossessed. In October that year, social unrest peaked when 100,000 people took to the streets in protest. The demonstrations escalated into violence when protesters attacked the county level government. The government retaliated, using force

to quash the protest, resulting in casualties. This protest and its repercussions became known as the 'Hanyuan incident', one of the largest-scale social conflicts since the start of the economic reforms (Peng et al., 2019).

The Hanyuan incident alarmed the central government and led to a heightened sensitivity to social instability. The government's economic agenda was subsequently broadened to encompass the secondary objective of achieving a 'harmonious society'. A key policy outcome from the Hanyuan incident has been the introduction of a uniquely Chinese instrument known as the Social Stability Risk Assessment (SSRA). SSRA is used to analyse factors that can affect social stability and formulate risk response strategies (Peng et al., 2019). The concept was developed by Hanyuan county, Suining city, in 2005 for major construction projects within its jurisdiction. Other local governments took the SSRA concept and adapted it to suit their own circumstances.

Methods

Qualitative comparative analysis. Qualitative comparative analysis (QCA) is a case-oriented method developed by Charles Ragin in 1987 to study datasets that are too small for linear regression analysis but too large for cross-case analysis (Ragin, 2008). QCA combines Boolean algebra and set theory to identify configurations of conditions that are necessary or sufficient for a given outcome (Schneider, 2018). Rather than following the mainstream statistical method of developing a single causal model that best fits the data, QCA explores multiple concurrent causality. In other words, the focus is on examining the diversity and complexity of causality and determining the number and characteristics of different causal models among multiple conditional variables. Among the available methodologies for small-number, case-based comparative research, Ragin's QCA was attractive to us because of the possibilities it offered to efficiently address the concerns of complex causality and the high context dependence of data (Rao et al., 2019).

The 173 cases analysed in this study are Chinese SSRA policies. The specific outcome is provincial economic competitiveness, which was selected as it can be observed and measured by changing the conditional variables described below. The outcome variables are high and low economic competitiveness.

To assist in choosing the conditional variables, we turned to the literature. In our initial review, we found that critical Chinese academic discourse supports a stronger role for project-affected people in project decision-making. At the same time, SSRA has become increasingly dominant in National Development and Reform Commission (NDRC) documents on large investment projects. These factors reflect the two key approaches we identified in SSRA policy documents during our review. The first approach, which we call problem-solving orientation (P1), seeks to formulate adequate countermeasures to social stability risks identified. Risks are identified based on public participation and stakeholder analysis and are presented as solvable social risks. Risk categories include land and house acquisition and compensation and socio-economic impacts. The second approach, which we call risk orientation (P2), determines a project risk grade based on ex-ante calculations of singular risks, so that high-risk projects can be rejected by the regulator. This type of policy identifies which aspects, processes and steps are at risk, and gives guidance on how to identify those risks. There is the potential, however, for risk-oriented SSRAs to degenerate into simply ticking risk check lists (Gransow and Price, 2019).

A detailed comparative analysis of policy texts was then conducted which identified a further two types of policy approaches. Performance assessment orientation (P3) refers to policies that specify the performance assessment of government

officers, including assessment methods, assessment basis and accountability channels. Specific field orientation (P4) refers to policies that have been developed to address a specific issue (e.g., pollution) in a particular industry (e.g., resources). The conditional variables used in this research are, therefore: (i) social stability problem-solving, (ii) the level of social stability risk, (iii) the performance of government officials managing SSRAs, and (iv) particular industries or industry issues (see Supplementary Table 3).

Data sources. Two groups of data were analysed in this study: (i) an existing dataset on the economic competitiveness of China's 31 provinces (2019–2020), and (ii) an SSRA policy dataset that the authors developed using public information from official government websites, news media, peer-reviewed academic literature, and provincial SSRA reports.

The pre-existing dataset, China's Provincial Economic Competitiveness, is a series of reports jointly released by the Fujian Normal University and Social Science Literature Publishing Co. Ltd (Li et al., 2021). First published in 2005, the report ranks the economic competitiveness of each province against 10 factors: macroeconomics, industry economics, sustainable development, financial factors, economic knowledge, the development environment, the level of development, the role of government, and overall coordination. It also provides a national ranking of provincial economic competitiveness (see Supplementary Table 1). China's overall competitiveness is captured in the World Economic Forum's Global Competitiveness Report. The 2019 edition ranks China as 28th in global competitiveness, unchanged from its 2018 ranking. In addition, the country maintains its position as the most competitive emerging market. A provincial dataset was selected for analysis to provide more detailed evaluation than is possible at national scale and for complementarity with the SSRA policy dataset.

The SSRA policy dataset contains 173 records (cases of SSRA policies) that were published between 2003 and 2020. The policies were selected because they mentioned SSRA or SSRA was the main subject. Each record has the following fields: policy name, year of issue, issuing department, the target industry, a summary of policy content and data sources (see Supplementary Table 2). Supplementary Table 2 shows that Sichuan and Jiangsu provinces have the highest variety of policies, including rural land, land acquisition, education reform, national land resources, religions issues and environmental protection, while Hainan and Xizang provinces have only one policy each. Owing to the paucity of data, Hong Kong, Macao and Taiwan were excluded from the analysis. The 173 records comprise five national policies and 168 provincial policies. Different provinces have different policies for different sectors, such as infrastructure, mining and hydropower. A major constraint in developing this dataset was the inability to access private government policy documents; analysis was limited to publicly available data. Agencies promulgating the SSRA policies include the National Development and Reform Commission, National Health Commission, Ministry of Water Resources, Ministry of Education, Ministry of Ecology and Environmental, Ministry of Justice, Ministry of Natural Resources and Price Bureau.

Four-step QCA procedure. As stated above, the outcome variables are high and low economic competitiveness. The conditional variables are the four types of SSRA policies identified from the 173 cases analysed, that is: (i) problem-solving orientation (P1), (ii) risk orientation (P2), (iii) performance assessment orientation (P3), and specific field orientation (P4). A four-step QCA procedure was used to analyse the data, comprising: (i) data calibration, (ii) necessity analysis of causal conditions, (iii) presentation of all

possible combinations of causal conditions in a 'truth table', and (iv) collinearity testing.

Step 1. Data calibration. Calibration refers to the process of assigning the degree of set membership to a case's specific conditions. The goal of calibration is for raw data score thresholds to be selected that reflect whether a score is fully in or fully out of set membership. The membership status of scores between these thresholds is ambiguous, so a point of maximum ambiguity is set (median value) (Douglas et al., 2020). In line with existing approaches, the direct calibration method was used to set the three calibration points: full membership (the upper quartile, 75%), crossover point (median) and full non-membership (lower quartile, 25%). The degree of set membership was assigned to the specific outcome and the four conditional variables. The data were calibrated via a fsQCA3.0 algorithm. FsQCA uses fuzzy set membership scores (any value between 0–1) to describe the attributes of the outcome and conditional variables. The data calibration results – fuzzy set calibration and descriptive analysis of each variable – are shown in Supplementary Table 3. Original data used and data after fuzzy set calibration are presented in Supplementary Tables 4 and 5.

Step 2. Necessary condition analysis. Necessary condition analysis ascertains what individual conditions are required for the outcome to occur (Fiss, 2011). To test for necessity, the fsQCA programme examines each condition (and its negation) in relation to the outcome (Ragin, 2008). For a condition to be deemed necessary for the outcome (or for its negation), it must exhibit consistency exceeding the 0.90 threshold (Schneider and Wagemann, 2012; Schneider, 2018) and have non-trivial coverage (Douglas et al., 2020). In our necessary condition analysis, we tested for the presence and absence of each condition (social stability problem-solving; the level of social stability risk; the performance of government officials managing SSRAs, and particular industries or industry issues.) to produce the outcome (provincial economic competitiveness).

Step 3. The truth table. To make the relationship between the cases, conditions and outcome clearer, the variable data were inputted into fsQCA to generate a truth table. The truth table presents all possible combinations of the causal conditions, one column for each condition and one row for each configuration.

Three preliminary thresholds were set to screen the truth table data. The original consistency threshold was set to 0.8 (Leppänen et al., 2019), the proportional reduction in inconsistency (PRI) threshold was set to 0.70 (Leppänen et al., 2019), and the case frequency threshold was set to 1 in line with common practice (Douglas et al., 2020). Cases that did not meet these thresholds were eliminated from the truth table. Owing to the lack of evidence and theory about the impact of SSRA policy on the exact direction of the results, this study assumes that whether a single type of SSRA policy appears or not, it can contribute to high economic competitiveness. By comparing the treatment of remainders as counterfactuals between the intermediate solution and the parsimonious solution, the core condition of each solution was identified.

In QCA terminology, a solution is an inference drawn from the data. The fsQCA software produces three types of solutions—complex, parsimonious and intermediate—based on the treatment of remainders as counterfactuals (Ragin, 2008). Remainders are the configurations not observed in the data and they indicate limited diversity within the sample (Douglas et al., 2020).

A common method to interpret the results is to use the intermediate solution to determine the number of configurations leading to the outcome and the inclusion conditions of these configurations, and then use the parsimonious solution to determine the core conditions of a given configuration (Fiss, 2011). The condition appearing in the parsimonious solution is called the core condition of the given configuration, which

indicates that there is a strong causal relationship between the outcome and the conditions. The other conditions that appear in the intermediate solution but not in the parsimonious solution are called peripheral conditions, which have weak causal relationship with the outcome. In this study, we relied on the intermediate solution because, unlike the other two solution types, it is based on informed assumptions linking the presence or absence of conditions to the outcome. We acknowledge that economic competitiveness of provinces is influenced by myriad factors, including the nature of SSRA policies.

Step 4. Collinearity test. Collinearity is the correlation between conditional variables, such that they express a linear relationship in a regression model. No collinearity means independent information is provided to the regression model. One of the assumptions of classical linear regression modelling is that there is no exact collinearity between the conditional variables. If the conditional variables are perfectly correlated, issues such as indeterminate parameters and infinitely large standard errors of the estimates may occur.

Results

Three findings are presented in this section: (1) no individual policy type contributes to high or low economic competitiveness; (2) one policy solution is necessary for high economic competitiveness and three policy solutions contribute to low economic competitiveness; and (3) there is no collinearity among explanatory variables and the model has statistical significance.

No individual policy is necessary for high or low economic competitiveness. The results of the necessity analysis are presented in Table 1. To test for necessity, the fsQCA programme examines each condition (and its negation) in relation to the outcome. The results show that consistency and coverage are all below 0.9, which indicates that no individual policy type is necessary for high or low economic competitiveness to occur (the consistency of conditions is lower than the 0.9 threshold). Therefore, to identify which configuration of conditions would lead to high and low economic competitiveness, the results from Table 1 were incorporated into fsQCA.

Conditions contribute to high and low economic competitiveness. All possible configurations of the causal conditions were outputted into what QCA calls a 'truth table' (see Table 2). Our research indicates the existence of two distinct results: high economic competitiveness and low economic competitiveness.

These different results represent different SSRA policy features that achieve the same result (high economic competitiveness or low economic competitiveness).

Table 2 shows the results from the fuzzy set analysis of high and low economic competitiveness. The results show four solutions that exhibit acceptable consistency ($>= 0.80$) and the presence of two core and four peripheral conditions. 'Solution coverage' indicates the proportion of the sample explained collectively by all the configurations that exceed the consistency threshold. One of the solutions, (S1), indicates high economic competitiveness while four solutions (NS1, NS2, NS3a, and NS3b) indicate low economic competitiveness. The model's S1 solution coverage is 0.43871, which indicates that 43.87% of high economic competitiveness across China's provinces is being driven by SSRA policy, while 56.13% is attributed to other causes. The results also shows that there are three configurations (NS1, NS2 and NS3) that generate low economic competitiveness. These configurations cover 3 of 4 of the cases (SSRA policies). They not only exhibit conditions for low economic competitiveness, but they account for 50.77% of this outcome variable. In other words, 50.77% of low economic competitiveness is being driven by NS1, NS2 and NS3 policies. This staggering result contrasts sharply with the central government's SSRA policy objectives (to pursue economic development and stability).

Social stability problem-solving policy leads to high economic competitiveness. Solution S1 indicates that there are two policy features (conditions) required for high economic competitiveness: social stability problem-solving and a focus on particular industries or specific industry issues (specific field orientation). This configuration has no other peripheral conditions. In other words, social stability problem-solving is the core condition required to achieve economic growth and social stability, and the policy features of social stability risk identification and performance assessment (of government officials managing SSRAs) are not required for high economic competitiveness.

Three types of SSRA policy contributes to low economic competitiveness. Table 2 presents three types of solutions for low economic competitiveness: (i) blind pursuit of performance assessment, (ii) only focusing on a specific field, and (iii) simply identifying social stability risk.

(i) Blind pursuit of performance assessment (NS1)
The performance assessment policy feature is a peripheral condition of solution NS1, while the problem-solving policy feature is absent from the core condition and the specific field orientation is absent from the peripheral condition. This means that low economic competitiveness is possible regardless of whether the province has risk-oriented SSRA policies or not. We argue that blindly pursuing performance assessment does not enhance economic development. While local governments are under pressure from the central government to implement its SSRA policy, there is a tendency for them to selectively promulgate policies that highlight performance assessment. China's development practice and institutional characteristics show that political and administrative accountability are crucial for public sector decision-making (Feng, 2013; Liu, 2018; Hou, 2020).

(ii) Focusing only on a specific field (NS2)
The policy feature of focusing on a specific field is a peripheral condition of solution NS2, while the problem-solving policy feature is absent from the core condition and performance assessment is absent from the peripheral condition. This means that low economic competitiveness is possible regardless of whether the province has risk-oriented

Table 1 Necessary condition analysis results.

Conditions	Outcome variable			
	High economic competitiveness		Low economic competitiveness	
	Consistency	Coverage	Consistency	Coverage
P1	0.7929	0.7545	0.3780	0.3597
~P1	0.3271	0.3447	0.7419	0.7817
P2	0.5123	0.5643	0.4870	0.5366
~P2	0.5794	0.5304	0.6045	0.5534
P3	0.5729	0.6053	0.4554	0.4812
~P3	0.5090	0.4831	0.6264	0.5946
P4	0.6116	0.6042	0.4929	0.4869
~P4	0.4806	0.4866	0.5993	0.6067

Data source: Generated from FsQCA3.0 software. Consistency is the similarity of relationships between the condition and the outcome. Coverage indicates the proportion of the sample's cases that share a particular configuration (Douglas et al., 2020). '~' indicates the absence of a condition.

Table 2 High and low economic competitiveness configurations in FsQCA.

Type	High economic competitiveness	Low economic competitiveness			
Conditions	S1	NS1	NS2	NS3a	NS3b
Problem-solving orientation (P1)	●	⊗	⊗	⊗	⊗
Risk level identification orientation (P2)				•	•
Performance assessment orientation (P3)		•	⊗		⊗
Specific field orientation (P4)	●	⊗	•	⊗	
Raw coverage	0.4387	0.2322	0.2038	0.2341	0.2341
Unique coverage	0.4387	0.1316	0.1406	0.1141	0.1141
Consistency	0.9444	0.9302	0.9002	0.9331	0.9331
Solution coverage	0.4387	0.5077			
Solution consistency	0.9444	0.8994			

Data source: Generated from FsQCA 3.0 software. Note: Black circles (●) indicate the presence of a condition, and circles with a cross-out indicate its absence. Large circles indicate core conditions, and small circles refer to peripheral conditions. Black points (•) indicate the presence of a peripheral condition. Blank spaces indicate situation in which the causal condition may be either present or absent.

policies or not. Focusing solely on a specific field without having a comprehensive understanding of the social risks, will make it difficult for policymakers to balance economic growth and social stability.

(iii)   Simply identifying risk level (NS3a, NS3b)

Social stability risk identification is a peripheral condition of solutions NS3a and NS3b, while the problem-solving policy feature is absent from the core condition. Specific field orientation is absent from the peripheral condition of NS3a and performance assessment is absent from the peripheral condition of NS3b. This means that low economic competitiveness is possible without policies that have problem-solving, performance assessment or specific field features. Risk-oriented policies require the calculation of an overall project risk grade, so that high-risk projects can be rejected by the regulator. However, it is common for project developers to simply specify a risk level that is acceptable the local government rather than undertaking a rigorous risk assessment (Hu and Hu, 2007). In addition, risks are dynamic and can change throughout the project lifecycle; risks identified early on may not eventuate while new risks may appear once projects have been commissioned. Simply identifying the level of risk without resolving social risk (risk to project-affected people) can lead to social instability and, consequently, adverse economic impacts.

Collinearity analysis. Our results show that there is no collinearity among explanatory variables and that the model has statistical significance. In the model, the significance level of the variable 'problem-solving' is 0.006, which is significant at the level of 0.01. Moreover, the regression coefficient is −8.611, which indicates that the variable has a significant negative impact on economic competitiveness. In other words, the more provincial policies that have problem-solving features, the higher the economic competitiveness of the province (see Supplementary Table 6). This is consistent with our configuration analysis.

Discussion and conclusion

China's central government has rolled out provincially managed SSRA policies across the country to protect economic growth by seeking to maintain a harmonious society. This study shows, however, that most SSRA policies are not delivering the economic objectives envisaged by the central government and that policy intervention is required. Only one combination of policy features (social stability problem-solving and specific field orientation) has delivered high economic competitiveness at the provincial level, accounting for 44.9% of influencing factors. Other factors include the diverse resource endowments of each province, geographic location,

topography, population base and the level of economic support from the central government. Eastern provinces, for example, Zhejiang Province and Guangdong Province have access to good ports and other key infrastructure, the topography is more hospitable than the mountainous western regions, they have strong population bases, and the central government has prioritised economic development in these provinces, including the establishment of development zones. Our results show that provinces with the highest economic competitiveness are predominantly those from eastern China.

Notwithstanding these contextual factors, SSRA policy intervention is required to meet the central government's economic objectives. Further research is needed to explore the scope and applicability of potential interventions. Simply calling for existing policies to incorporate the dual features of social stability problem-solving and specific field orientation is unlikely to be effective given structural barriers at provincial and local government levels. SSRA policies have been developed by multiple ministries across all provinces for diverse reasons. Achieving alignment across 173 different policies would require adept navigation through provincial aspirations and entrenched power relations. At the local government level, officials often reject public participation in project decision-making, claiming that increased participation could in fact enhance social stability risk (Gransow and Price, 2019). This runs counter to the accepted wisdom that public participation is integral to the problem-solving approach. In addition, major projects bring economic benefits to local government areas and officials are often unwilling to risk this critical income stream by extending project decision-making to impacted people.

This dilemma raises questions about the subject and scope of SSRA; that is, who or what is at risk? The objective of SSRA is to identify risks to China's social stability. The emphasis is national self-interest; that is, economic risk to government and the project developer rather than social risk to project-impacted people. If social risk from the project is not mitigated, it could lead to social instability, which could rebound as risk to government and the project developer and generate a wider set of uncertain risk conditions. This pathway is known as the 'rebound dynamic' (Kemp et al., 2016). Prioritising risk conditions in this fashion has other repercussions. As Gransow and Price point out, focusing on social stability risk can overlook adverse impacts that do not trigger social disturbances (Gransow and Price, 2019). Furthermore, we argue that de-prioritising social risk in this way reduces the ability of assessors to understand how projects affect people, whether the effects are harmful, whether safeguards are in place and whether those safeguards are sufficient to prevent harm. In practice, these are the material dimensions of risk that are most likely to seed instability. Extending the scope of SSRAs to consider social risk as well as social stability risk will give governments and project developers an improved understanding of the

causes and consequences of social harm and, thereby, mitigate the rebound effect. Extending the scope will also bring SSRA in line with risk and impact assessments that are required in international policies and standards, such as those set by the World Bank and the International Finance Corporation (IFC).

Data availability

All data generated or analysed during this study are included in this published article and its supplementary information files.

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Additional information

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