"Want-it-all"Mentality with Process and Outcome: Research Performance Evaluation Based on Empathic Supervision and Empathic Governance

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Abstract. As managers continue to think about how to stimulate innovative motivation among scientific research personnel, the effort to balance between process and outcomes of evaluation could become a new scientific perspective. Previous studies have focused on either supervision or governance, failing to take into account the "want-it-all" mentality among scientific research personnel. Therefore, this study took the perspective of empathy theory, to analyze the concern of research and development personnel for both supervision and governance, and to discover the pattern exists between cognition and emotion. Based on the above, this study focused on the case of employees' performance evaluation in Chinese universities, which is undergoing reforms, and analyzed 3224 items of feedback on policy implementation in a quasi-natural experiment context, combining the two research methods of Netnography, which is used to discover the structures and features in the text of the feedback, and field interview, which is used to dig deeper to find out the connotations and patterns behind the structures and features. It has been found that the positive state of the new reform in the Chinese case is concerned with the supervision measures of score feedback, policy implementation, and behavioral prohibition; while the negative state is about management and people's livelihoods, which presents an embedding logic of rules and environments. Therefore, this study proposed a corresponding model, and offered relevant insights and measures.

Keywords: scientific researchpersonnel; research performance evaluation; empathy theory; supervision; governance

1   INTRODUCTION

As scientific and technological innovation becomes increasingly crucial to market competition, the cultivation of scientific research personnel and their performance evaluation have become an important concern for various countries, some explored

the construction of accurate measures of scientific talents by factors, such as intelligence and personality (Bardach, 2024)[1]; some analyzed the educational cost planning for the cultivation of research and development personnel (Haihong, 2024)[2]; and others discussed the performance evaluation for the development of research skills. It is worth noting that people's understanding of research performance evaluation has become more objective, and they have begun to think about how to stimulate the innovation motivation of scientific research personnel, gradually presenting a model of supervision and governance, and beginning to think from the empathic perspective of scientific research personnel.

Among the reforms in many countries, China's reforms on research performance evaluation have been the most effective. The reform of research funding management, the evaluation of innovative research results (Zhang, 2011) [3], and the optimization of the evaluation system, have been renowned globally, due to the overwhelming reforms of the performance evaluation of employees in Chinese colleges and universities. For this reason, this study adopted both Netnography and field interviews to analyze the relationship between the process and outcome of the performance evaluation in Chinese universities. The study found that the "integration of supervision and governance" model presents a two-sided structure, forthe research performance evaluation reform in China, with the positive dimension showing researchers' high degree of acceptance and support for the outcome-process reform, and the negative dimension showing an anxiety that is contrary to the requirements of practical process and modernized education.The positive state generates cognition and emotion of shared vision and positive expectations, for the progress of the education evaluation system, while the negative state generates cognition and emotion of questioning the effectiveness of the policy, worrying about the management problems, and remaining attached to the traditional concept of evaluation. The interaction between the two has resulted in an embedding logical model of supervision and governance.

To sum up, the study proposed the significance of empathic supervision and empathic governance, discussed the interaction between the process and the outcome of research performance evaluation, and demonstrated the pro-environmental characteristics of empathy theory and its application. The study also provided practical insights for evaluating the performance of scientific researchpersonnel, as well as activating their innovative motivation.

2   LITERATURE REVIEW

2.1   Research Performance Evaluation

Research on performance evaluation profoundly reflects managers' concern for the multidimensional management of the research worker community.On the one hand, reexamining and improving the existing performance evaluation system composed by many factors, are the key to move towards high-performance evaluation (Liu, 2011) [4]. On the other hand, managers are also committed to exploring the continuous optimization and innovation of the performance evaluation system, aiming to stimulate the internal motivation and innovation potential of scientific researchers through a

more flexible and humane management approach, which could promote their individual growth and career development, so as to advance the prosperity and progress of the entire ecology of scientific research. It reflects the great insight and strategic governance of the managers on the long-term development of the scientific research, and shows the far-reaching foresight of governance.

Supervisory Perspective. Performance evaluation of scientific research from the supervisory perspective is an important means to ensure that research activities are carried out in a standardized and orderly manner, which emphasizes strict supervision of the research process, tight control of the results' quality, and tough sanctions against violations. The construction of a scientific and reasonable evaluation system, combined with a strict supervision mechanism (Kilminster, 2007)[5], ensures the standardization, transparency and efficiency of scientific research activities, which is not only a direct control of its results' quality, but also a strong safeguard of the integrity and academic ethos.These measures not only promote the rational allocation of scientific research resources and improve the efficiency of scientific research, but also effectively curb the academic misconduct. The evaluation system and mechanism from the supervisory perspective presents the characteristics of normality, rigor and fairness, reflecting the comprehensive attention to the scientific research process, the in-depth attention to the results' quality, and the macroscopic attention to the ecology of scientific research (Wagner, 2011) [6].

Governance Perspective. The goal of research performance evaluation from the governance perspective is to establish a multi-body collaborative governance mechanism for education, and then promote and realize the rule of law in educational governance. It has been proposed thatto achieve precise governance, needs both"broking down" and "building up", to increase the spirit of encouragement, which not only means to meet the needs of the interests pursuit,but also means to return to the essence of strengthening the overall governance; at the same time, there were concerns about how to explore the issue of "process and outcome" in education from substance, cause and governance,with the introduction of the market competition mechanism and the construction of a multi-body collaborative governance framework (Gasco, 2022) [7]. In addition, there were also academic researchers who believe that the causal chain of "measurement equals indicator, indicator equals performance" should be cut off at the earliest stage, so as to reshape the multi-dimensional performance evaluation system, andto embody the concern for fairness, efficiency, and innovativeness among the outcome and process, which jointly contribute to the optimization and upgrading of the governance system.

2.2   Empathy Theory and its Framework

Empathy theory, as a complex and profound psychological phenomenon, emphasizes that individuals are able to place themselves in and experience the thought world of others (Yi, 2023) [8].Centered on the double-stacked structure of cognition and emo-

tion, this theoretical framework is able to reveal the multidimensional nature of empathy and to provide an important perspective for understanding the interactions in interpersonal relationships.

In the field of research performance evaluation, when facing the dual challenges of supervision and governance, managers need to find a balance between innovation and compliance, by cognitively understanding the logic and purpose behind supervisory policies, and emotionally empathizing with the concerns and expectations of governors. In this process, university workers also have their unique cognitive and emotional patterns: on the one hand, they use rational analyses to interpret policy requirements; on the other hand, they experience emotional fluctuations caused by supervisory pressures, which affect both their decisions and actions. Therefore, a theoretical framework based on empathy can help to improve the efficiency and harmony of regulatory governance, and thus find the interaction between process and outcome.

3   RESEARCH DESIGN

Currently, China is actively promoting the education evaluation policy reform of "breaking the four centricity" and "breaking the five centricity", which aims to break the convention of "centricity" that overly relies on single indicators, such as the number of papers, scores, diplomas, titles and educational backgrounds in the traditional evaluation system. In order to respond positively to the national policy, a wide range of co-movement have been forged, with 34 provinces, municipalities and autonomous regions across the country having issued relevant documents and nearly 3,000 colleges and universities, gradually implementing relevant reform measures, covering a broad area from undergraduate to postgraduate education and even in scientific research institutes. In the process of reform, the policy clearly puts forward the principle of "equal emphasis on process and outcome", stressing that not only the output of scientific research results should be concerned, but also the quality and innovativeness of the scientific research process should be emphasized.

Therefore, in order to deeply investigate the attention of academic researchers to the process and outcome, as well as the interaction relationship between the two, this study carried out two stages of research.In the first stage, the collection software was used to collect and filter from 22nd August to 22nd November 2021 with the keywords for these three dimensions "education and teaching process", "assessment results" and "performance evaluation", and 3224 valid data were obtained. After the preliminary data processing, the ROST software was used to perform segmentation, deleting the words that did not meet the research topic; on this basis, semantic network analysis was performed, and a socio-semantic network was constructed. Lastly, the text was analyzed for sentiment analysis.

In the second stage, in order to further understand the specifics and effectiveness of the evaluation process and outcomes in the implementation, this study designed semi-structured interviews to validate the proposed model. Based on the results of the web text analysis, the researchers formulated corresponding interview outlines, covering various aspects, such as policy understanding, implementation, existing chal-

lenge, and suggestions for improvement. Subsequently, nine participants were selected from researchers, administrators and policy makers from different regions, universities and research institutes, to ensure the diversity and representativeness for the results of the interviews.(As shown in Table 1)

Table 1. Participant information

Serial number	Gender	Career	Region
SF1	Female	High-School Teachers	Eastern China
SF2	Male	High-School Teachers	Eastern China
SF3	Male	Managers	Southwest China
SF4	Male	Researchers in Research Institutions	North China
SF5	Female	Researchers in Research Institutions	Eastern China
SF6	Female	High-School Teachers	South China
SF7	Male	Managers	Eastern China
SF8	Male	Policy Maker	Central China
SF9	Female	High-School Teachers	South China

4   RESEARCH FINDINGS

4.1   Features and Structure

The study performed the sentiment analysis on textual content with the ROST software, the results of which are shown in Table 2.

Table 2. Results of Sentiment Analysis

Sentiment Orientation	Proportion (%)	Intensity	Proportion (%)
		Neutral	20.58%
Positive Sentiment	92.93%	Medium	25.61%
		Strong	46.74%
Neutral Sentiment	2.37%		
		Neutral	3.81%
Negative Sentiment	4.70%	Medium	0.65%
		Strong	0.08%

(1) General Characteristics of Sentiment in Online Evaluations
① General Sentiment is Dominated by Positive Sentiment
Table 2 shows that positive sentiment accounts for 92.93% of the content, neutral sentiment accounts for 2.37%, and negative sentiment accounts for 4.70%, which shows that the proportion of positive sentiment is much larger than that of neutral and negative sentiment, indicating that most of the comments are supportive to the management of "Breaking the Five Centricity". As in the word frequency analysis, most

of the words are positive sentiment, and even the frequency is expanded to more than 100, the negative sentiment still accounts for a tiny proportion, so it can be seen that most of the comments on the Internet have a positive attitude towards the enactment and implementation of a series of policies on "process and outcome".

② Features of Sentiment Intensity

As can be seen in Table 2, 46.74 % positive sentiment is strong, 25.61 % is medium, and 20.58 % is neutral, unlike negative sentiment, which is predominantly of average intensity, with the proportion of medium and strong being much lower than that of average intensity. Thus, most of the comments on "process and outcome" were positive.

The negligence in the education process due to the outcome-oriented approach is of a special nature. In the new era, the shortcomings of the "outcome-oriented" mentality are becoming prominent, which not only violates the laws of education and the healthy development of students, but also ignores the essence of education and the cultivation of talents, most importantly, it counters the requirements of the China's comprehensive promotion of the educational modernization. The enactment of a series of development policies that focus on both process and outcome will inevitably involve many aspects, so a further in-depth analysis of the collected comments reveal that the general public is highly concerned about the "building-up" that follows the "breaking-down". The focus of the public is about the impact of the policy enactment on issues, such as the development of science and technology, the professional title evaluation, the college enrollment rate, student, and school. People want to know how those things happen, and to witness this historic moment. Participants' emotions fluctuate greatly when it comes to their needs in various aspects, so the proportion of positive sentiments reaches 92.93 %, and there is a relatively large part of strong intensity.

4.2   Cognition and Sentiments in Positive States

As can be seen from the semantic network structure diagram, "evaluation" as a core node not only connects multiple sub-level nodes (e.g., "prohibit", "school", "avoid"), but also widely triggers the emotional resonance of the general public. This resonance stems from the public's recognition of the idea behind "equally value the process and the outcome", which means education evaluation should not be limited to scores and college enrollment rates, but should focus more on students' all-round development, as well as their physical and mental health. This resonance has prompted people to express positive expectations such as "improvement", "perseverance" and "development", reflecting the public's common vision for the progress of the education system.

Empathy also involves cognitive understanding and acceptance. As for the importance of the relationship between outcome and process, the public gradually recognizes the shortcomings of the "score-centricity" mentality under the exam-orientated education system, and this cognitive shift serves as an important basis for the emergence of positive emotions. Through empathy, people are able to view education issues from a broader perspective, and understand and accept that the policy of breaking the "five-centricity" aims to promote fairness in education, alleviate the

burden on students and promote their all-round development. This cognitive under-standing and acceptance further strengthen the public's positive sentiment towards the policy. (As shown in Figure 1)
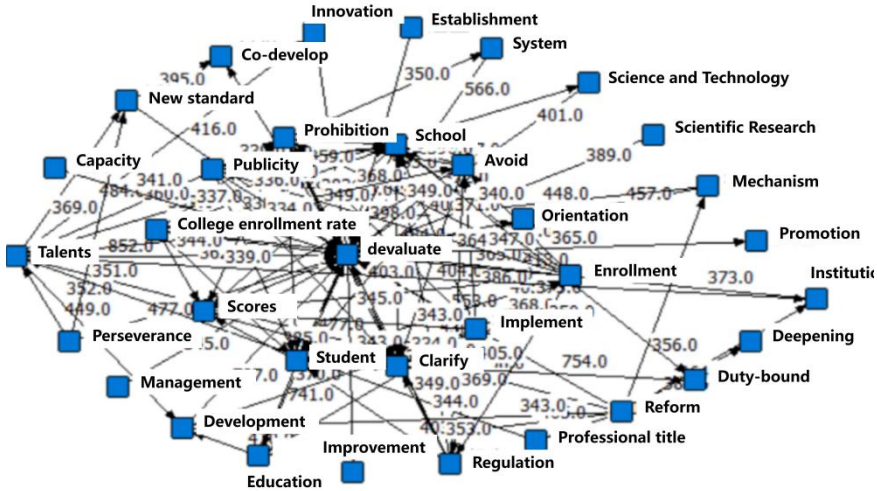

Fig. 1. Semantic Network Structure Diagram of Positive Sentiment

4.3 Cognition and Sentiments in Negative States

In the network structure of negative sentiment, "evaluation"is the core node, reflect-ing the people's direct feedback on "outcome and process". However, this feedback often carries a certain cognitive bias. On the one hand, some people may think that "equally value theoutcome and process" is just an empty talk or a superficialreform, which does not really touch the essence of the education evaluation system; on the other hand, some people worry that evenwith the "want-it-all" mentality, the lack of new and effective evaluation criteria may still lead to chaos and even injustice in the evaluation system.This cognitive bias has led to the negative sentiments towards the policy among the general public. Insufficient management and supervision are anoth-er important reason for negative sentiment. In the semantic network structure dia-gram, the words "management", "measures" and "regulations" are closely related to the core nodes of "evaluation", indicating that the public is highly concerned about the management in the process of policy implementation. When the public sees that the policy of "equally value the process and the outcome" has not been effectively implemented or supervised in practice, they tend to be disappointed and dissatisfied. Such sentiments further aggravate their negative attitudes. Traditional concepts such as "grade" and "seniority" are still deeply rooted in the public. The repeatedly men-tioned "five-centricity" standard in the negative comments shows that such traditional concepts still influence people's evaluation to a large extent. Although the relevant policies aim to break this single evaluation criterion, it is difficult for people to change their long-established concepts and habits in a short period of time. This con-
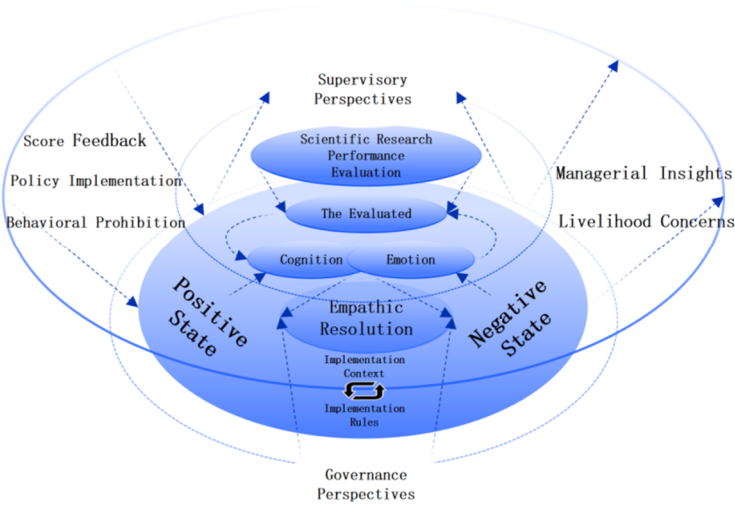
flict and contradiction in perceptions is also one of the major causes of negative sentiments. (As shown in Figure 2)

Fig. 2. Semantic Network Structure Diagram of Negative Sentiment

4.4 Logic and Model

（SF3）Based on the textual content of the interviews in individual cases, this study further validated results of the semantic network analysis that the positive state presented by Chinese universities workers in the reform on research performance evaluation, is closely related to the supervisory measures such as score feedback, policy implementation and behavioral prohibition. "Score feedback, as a direct incentive mechanism, effectively enhances the motivation of scientific and technological researchers; the transparency and fairness of policy implementation enhances their trust; and behavioral prohibitions clarify the bottom line and diminish the violations." (SF3)However, in terms of management and people's livelihood, scientific research personnel also show a somewhat negative sentiment. This is mainly reflected in the inflexibility of the management system and the negligence of livelihood concerns, which affects their overall job satisfaction and innovation ability. "Supervisory measures alone are not sufficient to fully stimulate the innovation motivation among scientific research personnel, which need to be combined with a governance perspective to optimize the internal environment." (SF8) In addition, the study further revealed the embedded logic between supervisory measures and environmental governance. "Rules provide a code of conduct for scientific research personnel, while the environment influences their cognition and emotions through cultural and institutional factors." (SF5) It is evident that the two interact with each other to influence the behavior and performance of scientific research personnel. Thus, this study proposed the Supervision-Governance Embedding Model", as shown in Figure 3.

Fig. 3. Supervision-Governance Embedding Model

The model is hierarchically constructed with the "governance perspective"as its core, emphasizing the integration of supervision and governance, and refining the specific contents and concerns under the governance perspective through multiple sub-items (e.g., score feedback, policy implementation, behavioral prohibition, cognition and sentiment, empathic resolution, and interest conflict), in order to optimize the supervisory measures and the governance environment. Together, they act on the cognition and sentiments among scientific research personnel, thereby enhancing their innovation motivation and performance.

5   RESEARCH CONCLUSIONS

5.1   Summaries

From the perspective of empathy theory, this study analyzed the characteristics of scientific research personnel who are concerned with supervision and governance at the same time, and uncovered the existing patterns of cognition and emotion, as well as the positive and negative sides. And based on this,an integrated governance model has been constructed, which demonstrates the different aspects and their interrelationships from the governance perspective, and helps people understand its complexity and systemic nature in a more comprehensive way. Meanwhile, focusing on the dynamic, comprehensive and practical nature of governance can help decision makers better grasp the focus and direction,as well as develop more scientific, rational and effective strategies of governance.

5.2   Theoretical Implications

First, the significance of empathic supervision and empathic governancehas been put forward. This study deeply analyzed the cognitive and emotional patterns of scientific research personnel in the scientific research performance evaluation, and revealed the importance of empathic supervision and empathic governance in enhancing the efficiency and harmony of scientific research management;

Second, the interaction between process and outcome of scientific research performance evaluation has been discussed. The process and outcome in scientific research performance evaluation do not exist in isolation, but influence and depend on each other. On the one hand, the standardization and innovativeness of the process directly affect the quality of scientific research outcomes; on the other hand, the commercialization of scientific research outcomes in turn validates the rationality and effectiveness of the process.

Third, the pro-environmental features of empathy theory and its application have been demonstrated. Empathy theory emphasizes the cognitive and emotional resonance of individuals in perceiving the spiritual world of others, and this resonance helps to build good interpersonal relationships in scientific research management, which enhances the sense of identity and sense of belonging to the scientific research institutes. At the same time, by optimizing the research environment and enhancing the job satisfaction of researchers, it promotes the harmony and prosperity of the research ecosystem.

5.3   Practical Implications

Optimizing the performance evaluation structure of scientific research personnel highlights the importance of building a diversified evaluation system. This study aimed to discard the traditional single criterion of "outcome-oriented" or "process-oriented", and instead cover multiple dimensions such as scientific research outcomes, scientific research process, teamwork and innovation ability. This ensures the comprehensiveness and fairness of the evaluation, and also improves the standardization and transparency of research activities. At the same time, the concept of strengthening process management makes the scientific research performance evaluation no longer focus only on the outcomes, but pay more attention to the quality and innovativeness of the scientific research process, which provides a strong support for the comprehensive evaluation of scientific research personnel.

In stimulating innovation motivation, the dual path of flexible supervisory strategies and fostering an empathic governance environment should be implemented. This study argued that a flexible supervisory strategy avoids the rigidity of the 'one-size-fits-all' approach, and by strengthening supervision while maintaining policy flexibility and effectiveness, it better adapts to the actual needs of different scientific research personnel and promotes their innovative potential. In addition, the creation of an empathic governance environment highlights managers' concern for the psychological and emotional needs of scientific research personnel.And by establishing a favorable environment that with supports for innovation and tolerance for fail-

ure, it could effectively stimulate the intrinsic innovation motivation of scientific research personnel, which promotes the prosperity and progress of the research ecology.

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