Indicators in Risk-based Educational Supervision

Jos Verkroost*

Received: 14 October 2024; Manuscript No: JESR-24-150213; **Editor assigned:** 16 October 2024; PreQC No: JESR-24-150213 (PQ); **Reviewed:** 30 October 2024; QC No: JESR-24-150213; **Revised:** 04 November 2024; Manuscript No: JESR-24-150213 (R); **Published:** 11 November 2024; **DOI:** 10.22521/JESR.2024.14.4.37

INTRODUCTION

The position of a government inspection agency overseeing public services, such as the Education Inspectorate, lies in the relationship between principals and agents. The principal is the Dutch Ministry of Education, Culture, and Science (OCW), and the agents are the school boards. To monitor whether they perform their duties satisfactorily, the Education Inspectorate oversees the schools. If the principal cannot directly monitor the work of the agents, provisions are necessary. Inspection services serve as such a provision. They assess whether the agents are indeed delivering the public services. To maintain effective and efficient oversight, it is necessary to measure results against intended goals using indicators. These indicators should, at the lowest possible cost, provide as much insight as possible into the (risks of) achieving the set goals, while simultaneously causing as few side effects as possible in the actions of the agent. This section begins with the theoretical framework for the execution of oversight. Then, three studies examine how certain risk indicators function and what effects and side effects can be expected. The section concludes with a description of the practical application of the findings and general points of discussion. This article is a summary of the author's dissertation.

THEORETICAL FRAMEWORK

Principal-agent relationships

The principal-agent model involves a person or entity that aims to achieve a certain result but cannot (entirely) do so itself. To accomplish this, it must hire an executor. At that moment, a relationship between the principal and the agent arises. The principal gives the agent instructions, the agent carries them out, and is compensated for doing so. The first complication in this dynamic is that the interests of the principal and agent do not (entirely) align. To streamline these interests, the principal offers a contract. This can be a complete or incomplete contract. Complete contracts assume that all activities and results of the agent, as well as the actions of the principal, can be defined in advance in such a way that a 3rd party (e.g., a judge) can assess whether the contract terms have been met. Often, such contracts cannot be made due to uncertainties surrounding execution or the complexity of the tasks. In such cases, one must settle for incomplete contracts. These contracts contain much broader agreements that cannot be easily evaluated by a 3rd party. Such contracts require trust between the contracting parties and often function within long-term relationships. They are also referred to as relational contracts. A second complication is that when entering into and executing contracts, there is an information asymmetry between the principal and the agent. There are three types of information asymmetry that can occur simultaneously. The first is called moral hazard. This occurs during the relationship between the principal and the agent, i.e., after the contract is signed. The principal cannot observe precisely what the agent does, only the results of his actions. This gives the agent opportunities to act in his own favor [1-4].

Dr. Jos Verkroost is a former Strategic Inspector of the Dutch Education Inspectorate

The second type is called adverse selection. This occurs before the contract is agreed upon. An agent with prior knowledge that the principal does not possess is in a more favorable position. The agent can present the circumstances as less favorable than they are and thus negotiate better terms. Finally, there is costly verification. The result of the agent's actions can only be determined at a high cost. The principal must then choose whether to incur these costs or to trust the agent's word. Further complicating is the fact that there is almost never a situation where a contract involves exactly one principal and one agent in isolation. Agents often deal with multiple principals, each with different and sometimes competing goals. In some cases, the roles of principal and agent may even switch depending on the situation. Moreover, it is often a layered scenario, where multiple levels form a chain of principals and agents. It is also important to note that the accuracy with which performance is measured impacts the size of the performance-based reward for the agent. The intensity of the agent's performance incentive will be stronger when the way performance is measured closely aligns with the organization's objectives.

The government and the executive organisations in education

"Education is the subject of constant concern of the government" (Art. 23 of the Constitution). With this, the government becomes the principal of Dutch education. Education is free, subject to government supervision, and the government is responsible for providing public education and funding private education under the same standards. In this way, the government assumes responsibility for the functioning of a large number of agents who provide education that meets a set of legally regulated quality standards. The contract the Ministry makes with the school boards is an incomplete contract. This is so formally due to the provision that education is free. However, it is also practically impossible to outline the total societal contributions that a school board must make in a complete contract. Whether students become good citizens who contribute to society, and the school's role in that process, cannot be entirely defined in legally enforceable agreements. This means there is considerable leeway in the contracts, and a significant portion of the performance is based on mutual trust. The foundation for this is partly formed by a set of conditions for the execution of the main task. These are outlined in so-called formal quality requirements that can be determined for (partially) funded education. These requirements are established in sector-specific laws, such as the law on primary education. Whether this involves a complex but incomplete contract or a series of contracts, sometimes complete and other times incomplete, depends on the perspective. After all, the legal requirements are enforceable.

There has always been incomplete contracting in education, but the balance between formal and informal agreements has changed over time. Until the late 1980s, educational regulations included many highly detailed legal provisions for schools. The contract as a whole was incomplete, but the conditional constraints were significant. A key aspect of this was the system of reimbursement-based funding in education. School boards were reimbursed for all their expenses within an extensive set of standards, from inventory to personnel. Acquisition and expenditure were strictly regulated. The assumption was that within these contextual conditions, schools would almost automatically deliver high-quality education. This balance of enforceable and non-enforceable provisions meant that school boards primarily created the organizational context for education but could hardly be held accountable for its outcomes. Within these stringent rules, they were unable to fully meet changing societal demands. This prompted several changes that began in the 1980s. Reimbursement-based funding was gradually replaced by lump-sum funding. Under this system, school boards receive a sum of money based on several standards, including the number of students, which they are free to spend within certain limits. The acquisition of funds remained fixed, but their expenditure became largely discretionary. With the change in funding, many regulations were scrapped or adjusted to allow this freedom in practice [5-8].

These developments led to a substantial adjustment of the contracts. They remained incomplete,

but their content changed. School boards became increasingly responsible for education, and the degrees of freedom in its organization grew to the extent that the quality of education could be seen as a property attributable to the school and thus assessable. Accordingly, the number of agreements with the government decreased. However, this was replaced by new agreements that increased the number of principals for educational institutions. Labour law provisions for personnel, which were previously determined centrally by the government, now had to be negotiated between school boards and labour unions, within budgetary frameworks set by the government. This increased the dimensions of the principal-agent relationship. There are now multiple principals with diverse objectives. This raises the question of how agents manage the competing demands they receive from these different principals. Agents may also face internal competition and differences in interpretation regarding the assignments they receive from the principal, especially with incomplete contracting. This complex situation is also present in Dutch education.

Supervision

Supervision is defined as the process of collecting information to determine whether an action or entity meets the requirements set for it, forming a judgment about it, and if necessary intervening as a result. Supervision of public services can focus on three activities that may overlap. First, ensuring compliance with regulations. Second, providing information on the price and quality of (public) services delivered by independent organizations. Finally, informing the minister, parliament, and society about developments in practice and the effects of policies.

Figure 1 illustrates the relationships between the legislator/the ministry (the principal in "sturing"), the supervisor, and the object of supervision (the agent). The supervisor, on behalf of the principal, monitors the actions of the agent, "the entity being supervised." The "Leidraad objectgericht risicomanagement" describes objects of supervision as the subjects to which the process is applied, listing examples such as companies, governing bodies, citizens, the environment, and buildings. Some of these can be classified as agents, while others are more accurately described as themes [9,10].

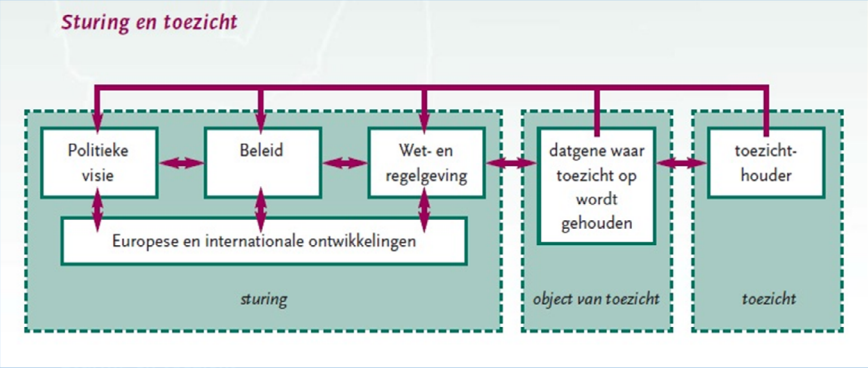

Figure 1: Relationship management and supervision [10]

Figure 2 shows a breakdown into three categories of supervision objects and, consequently, three types of supervision. Compliance supervision applies to all citizens and organizations, including those lower in the hierarchy. Its primary focus is ensuring that they adhere to the law. The corresponding intervention is called enforcement. Performance supervision is directed at the primary activities of organizations with a public mandate. The tasks and authorities of the supervisory body are tailored to this. Enforcement is also possible here as an intervention, where the execution of the public task involves legal regulations. Supervision of subnational governments (often municipalities) is a final, distinct category. These governments are not subordinate to the central government and are subject to their own democratic oversight.

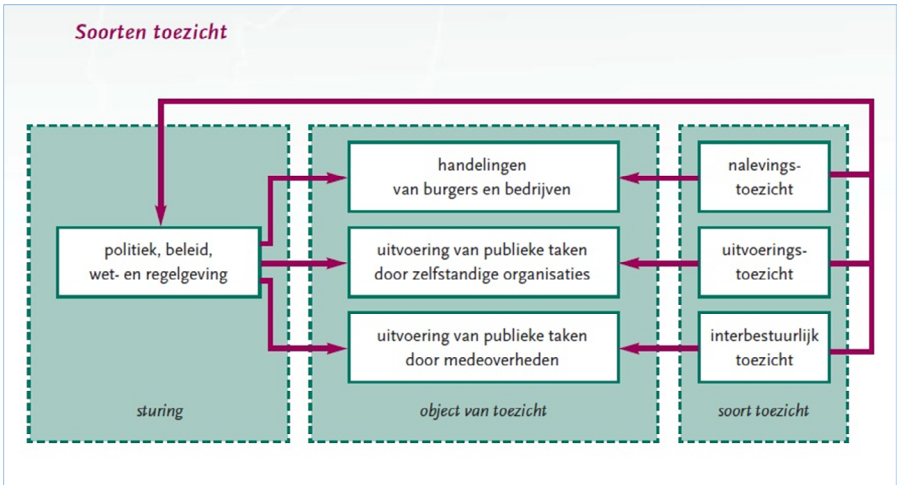

Figure 2: Types of supervision

The principal-agent relationship only applies to the 2nd category. The relationship between co-governments is generally not of such a nature, with the exception of a limited number of specific provisions. Citizens and companies do not perform public tasks and therefore do not have such a relationship with the government. In education, the constitution already stipulates that the government supervises its implementation. This establishes that there is an intermediary entity in the principal-agent relationship between the Ministry of Education, Culture, and Science (OCW) and the school boards: The supervisory authority. Its role is regulated by the Education Supervision Act (WOT). This division into multiple hierarchical layers is often a practical reality, especially in the public sector, with supervision being a typical example. The supervisory authority operates as an agent towards the legislator/ministry and as a principal towards those under its supervision. The "Kaderstellende visie" does not make this distinction but views the supervisory authority as an extension of the principal. This creates an additional dynamic in the system, whereby the supervisory authority can emerge as an independent entity. Moreover, the public sector, much more than the private sector, operates with multiple principals alongside each other. As a result, agents face more tasks that lead to competing demands and priorities. This situation is actively encouraged in Dutch education because institutions must take into account their (local) stakeholders and be accountable to them. Supervision in education, therefore, operates in a field where there are incomplete contracts between the final principal (the ministry) and the final agent (the educational institutions), and where those contractual terms, even if they are legal requirements, must compete with other demands from the environment. The supervisory authority must exercise optimal supervision within this context.

Risk-based supervision

Risk Based Supervision (RBS) has emerged since the turn of the century. It involves the development and use of systematic, decision-supporting frameworks and procedures to prioritize supervisory activities and allocate supervisory capacity, based on an assessment of the risks organizations pose in relation to the societal goals of regulation [11,12].

All RBS systems share 4 common elements. The starting point is based on risks rather than legal requirements. Risk-based supervision helps make informed choices about which regulations to enforce from the seemingly endless amount of rules. Next, an assessment is made of the severity of undesirable events and the likelihood of their occurrence. Based on this, supervisors then rank the organizations or activities they oversee and, finally, allocate supervisory capacity accordingly. RBS is thus a means of reducing verification costs. In the Netherlands, RBS has gained a more or less formal status in the "Kaderstellende visie op toezicht". One of the 6 principles of good supervision presented in this vision is selectivity. Selectivity refers to 2 aspects: The extent to which the government itself ensures supervision, and the form and extent

of supervision based on a consideration of risks, costs, and benefits. The first aspect concerns providing supervision through forms of self-regulation or certification. The latter aligns with the definition of RBS outlined above.

Following the "Kaderstellende visie", the Council of Inspectors-general developed guidelines for all inspections to implement a risk-based approach. This involves 5 steps in a structured RBS process:

1. Establish context
2. Identify hazards
3. Determine and analyze risks
4. Develop supervision strategies
5. Intervene

These steps are accompanied by communication and consultation with internal and external stakeholders, as well as monitoring and evaluation of supervisory activities.

The "Begrippenkader" of national inspections does not define RBS but does define the underlying risk analysis. This is: "the structured and weighted use of available knowledge to determine how often hazards may occur and the potential magnitude of their consequences, and to propose how to eliminate or mitigate the threat, with the goal of making an informed choice of priorities in supervision." The framework distinguishes between an "object risk" and a "subject risk". Object risks arise from the nature of an action or object itself. A subject risk arises from the compliance behavior of a person or organization. The risk associated with a supervised entity is a combination of the object risk and the subject risk. For a risk analysis, object risks are 1st determined to establish general priorities. This is also known as "programmatic enforcement" particularly for organizations with a public duty aimed at legally prescribed quality standards or conditions for their operation. These regulations or quality standards are identified and prioritized based on the greatest risks. This priority generally determines the level of enforcement effort. Next comes the analysis of subject risks. This determines which supervised entities pose the greatest risk of non-compliance. This involves examining the causes of non-compliance and how those causes can be identified. The practical implementation of this is highly dependent on the context in which the supervisor operates and the availability of risk indicators. There is no universally applicable methodology for this.

Risk-based supervision by the education inspectorate

Long before 2005, specifically for education, the principle of selective supervision was already codified in the WOT (Education Supervision Act), which stipulated that supervision of education should be proportional: The inspectorate would not burden institutions more than necessary for proper supervisory practice. This could be done in three ways:

1. Frequency of supervision inspections;
2. Intensity of supervision inspections;
3. The manner in which the inspectorate would gather its information for supervision [13-15].

The WOT elaborated this in the regulation that the intensity of supervision would depend on the quality of education, the assurance of professionalism within the institution and its governance, compliance with legal regulations, and the institution's financial situation. With this, several indicators for RBS were explicitly included in the law. In the first years under the WOT, this proportionality hardly came into effect. The House of Representatives wanted all schools to be physically visited by an inspector every year, which meant that frequency as a selective mechanism was not functioning. The same applied to intensity, as the inspectorate

struggled to limit the scope of its investigations. Proportionality mainly consisted of extra investigative efforts. The 3rd element of proportionality, information gathering, also did not decrease because schools did not provide the expected self-evaluations necessary for this.

It wasn't until 2007 that developments gained momentum. Prior to that, the Vision on Supervision by the Ministry of OCW had been published. In this vision, besides selectivity, the other 5 characteristics of good supervision from the "Kaderstellende visie" were elaborated, especially "collaborative" and "decisive." To this end, from 2008 onwards, the inspectorate was merged with the financial supervision function of the Ministry of OCW and was given sanctioning powers, which until then had been reserved for the minister. The goal was to achieve integrated supervision capable of sanctioning shortcomings within institutions. The risk-based approach to educational supervision was then implemented quite vigorously and proved successful in reducing the number of very weak schools and their recovery time. However, there were also some side effects of the supervision approach due to a lack of alignment. These side effects are discussed below. The merger with the financial supervision function did not immediately lead to an integrated approach, but the evaluation of the collapse of Amarantis gave this a boost.

Effects and side effects of governance and supervision

Governance and supervision over the realization of intended results by the agent can lead to unintended effects. For a long time, setting (concrete, measurable) goals was seen as a panacea for improving employee motivation and organizational performance. Instead of vague goals like "do your best," concrete, challenging objectives were thought to significantly enhance performance. However, this can also have strong and predictable side effects. For instance, goals can be too specific and too narrow. The focus on these goals can lead to a blindness to side effects. This issue is not easily solved by setting more goals, as people tend to ignore some of them. Agents may prioritize quantitative over qualitative goals and short-term objectives over long-term ones. A short time horizon for goal achievement can also have negative effects, as agents may relax after the deadline passes. Overly ambitious goals can lead to increased risks and unethical behavior, while failing to meet them can result in demotivation. Additionally, setting goals can hinder learning and collaboration. In education, several undesirable effects can be identified as forms of moral hazard. One example is intentional strategic behavior or gaming. A well-known form of this is "window dressing," where situations are created solely to impress the supervisor. This can sometimes escalate into fraudulent behavior, such as giving weaker students time off during tests or falsifying test results. Schools may also attempt to inappropriately improve results, for example by allowing extra time for tests or by putting posters with sizes and weights on the walls of the exam room.

There is also unintentional strategic behavior, where those being supervised unconsciously behave in ways that align with the supervisor's perspective. This can lead to procedural formalization and "teaching to the test," as well as a strong focus on short-term results. School boards tend to prioritize the quantitative focus on educational outcomes over the more qualitative goals of education. Finally, supervision can cause stress among those involved. After an announcement, schools may prepare extensively and instruct teachers beforehand. In some cases, which can be considered another form of intentional strategic behavior, weaker teachers are even given a day off during the inspection [16-18].

The phenomena generally seen with agents can be even more pronounced with RBS, as the possibilities for such behavior increase. Risk indicators are often derived from variables used to assess actual quality. This can lead to a shift in perception, where risk indicators are interpreted as actual quality risks. This increases the gap between the goals of the agent and the principal and creates more room for undesirable effects. Since the supervisor applies risk-based supervision to keep verification costs low, the number of risk indicators is often significantly smaller than those used for overall judgment. These risk indicators then determine whether or not a supervised entity is visited and further investigated. Strategic behavior is therefore more likely to occur around this smaller set of indicators. After all, if an agent can stay under

the supervisor's radar, the other points of evaluation require less effort as well. Educational outcomes, for example, are an important part of risk detection. If these outcomes are insufficient, this triggers further investigation according to the risk-based approach, where these same outcomes are also part of the evaluation. To mitigate occasional fluctuations, an outcome is only deemed insufficient if it falls below the standard for three consecutive years. This creates a strong incentive to ensure that results are sufficient at least once every three years, which opens the door to strategic behavior. Additionally, there is the view that the inspectorate's risk model is suboptimal because learning outcomes are the main risk indicator. This identifies schools that are already underperforming (and where students have already been receiving poor education for some time), making the identification process rather late. A more suitable risk indicator would identify schools before their results deteriorate, allowing for timely intervention. Such indicators could come from self-evaluations, the quality of educational processes, or other risks with predictive value. Furthermore, the main explanatory variable is also the dependent variable, meaning that the identification of a risk is almost simultaneously the detection of a deficiency. On the other hand, before the introduction of RBS, no indicator at all guided the allocation of supervisory efforts. Institutions were inspected at random, and it took much longer for deficiencies to be identified. The risk-based approach at least led to an improvement in timeliness, even if it was less than theoretically ideal. Moreover, an important goal of risk-based supervision is for the supervisor to efficiently allocate supervision capacity to the risks, without unnecessarily burdening those under supervision. Alternatives, such as self-evaluations or the analysis of educational processes, are labour-intensive. They require significant accountability from institutions or significant research efforts from the supervisor. This reduces the intended efficiency of RBS and increases verification costs instead.

RESULTS

The research

For the regulator to effectively conduct Risk Based Supervision (RBS), they must have sufficient indicators that reflect (future) performance. They should avoid focusing too quickly on simple metrics that are easily influenced by opportunistic behavior, which can lead to undesirable side effects. Given the broad supervisory task of the inspectorate-both regarding the results of primary activities and the economic conditions under which they operate-the indicators must cover both areas [19-21].

Three studies have examined such approaches. In each case, a prerequisite is that the necessary risk information does not need to be specifically provided by school boards. This is a political choice: Institutions should not be burdened more than necessary, and this would be inconsistent with information that must be specifically prepared for supervision purposes. Moreover, information created solely for this purpose could suffer from intentional strategic manipulation from the start. Therefore, only information already available for other reasons has been used. Firstly, there is information that the inspectorate itself has collected while assessing quality assurance in secondary education. Since the changes in the governance of education in the 1990s, the responsibility for the quality of education has been placed on educational institutions themselves, and they must systematically safeguard and improve it. The inspectorate evaluates these systems. Since the premise of quality assurance is that school performance is guaranteed and improved through it, one would expect this assessment to have a predictive effect on future quality and could be used for selecting institutions within the context of RBS.

Next, the focus is on risks related to financial performance. Institutions are also financially autonomous and responsible for financial management. Most important is the continuity of the public provision of education. Risks to that continuity can have a significant negative effect on the quality of education. The Amarantis Committee on financial problems concluded that the inspectorate's former system-detecting risks based on a few key figures in the most recent annual financial statements-was akin to "supervision in the rear view mirror." Research has

been conducted into whether a number of existing risk models based on financial ratios better predict where future risks might occur. The information for this is provided by institutions in the context of their regular annual reporting, which is audited by an accountant. Although not entirely free from opportunities for strategic behaviour, this information could potentially serve as a suitable basis for risk detection. Finally, an institutional structural characteristic that is not susceptible to strategic manipulation has been examined, namely whether or not school boards are vertically integrated. Vertical integration of school boards is a potential risk due to the greater complexity for the institutions. On the other hand, vertical integration in economic theory is also seen as a way to reduce uncertainty. The question is whether verticality is more of a risk or a benefit.

Assessment of quality assurance as a risk indicator

Educational institutions, as agents, are responsible for the quality of their education and must systematically safeguard that quality [22]. They have significant freedom in designing their educational approach. The relationship with the principal is one of incomplete contracting, constitutionally guaranteed. The method of quality assurance is also flexible. Education law does not prescribe specific models but rather speaks in very general terms about the responsibility for ensuring educational quality. The only aspect explicitly mentioned is the competence of the staff. Interestingly, this is not included in the inspectorate's evaluation of the quality assurance system.

This study examines to what extent the standard assessment of quality assurance by the inspectorate explains the performance of educational institutions. This analysis aims to determine whether this evaluation can serve as a risk indicator for future performance. The study is based on the American Baldrige model not as a norm, but because it covers a wide range of management activities and has been the subject of extensive scientific research regarding its effectiveness. The empirical part of the study was conducted using the assessments inspectors provided regarding the quality assurance of institutions. These evaluations were compared with the institutions' performance in terms of educational quality and finances. By dividing the assessments and performance into 2 periods, it was possible to assess whether there was a causal relationship between the quality assurance in the 1st period and the performance in the subsequent period [22,23].

The study 1st revealed that merely "having" a quality assurance system does not, in itself, provide any meaningful information. Such a general approach has no correlation with actual quality. Comparing specific indicators from the inspectorate's framework with the Baldrige quality assurance model shows that the inspectorate's framework only includes three components deemed relevant by the Baldrige model, notably excluding personnel policy. As a result, positively rated quality assurance does not extend its influence to the overall organization. The analyses clearly show that those components at best have predictive value for the topics to which they are directly related. There is no spill-over effect to other areas. Educational quality assurance does not provide insights into financial performance and only reflects educational quality in relation to the specific aspects it targets, and even then, only for those aspects. This aligns with the perspective on alignment between goals and the way they are measured. This has implications for the use of quality assurance data in supervision. A quality assurance mechanism can only be informative about educational quality within a risk-based approach if it is very specific and highly aligned.

Risk indicators for financial continuity

As the principal, the government provides educational institutions with resources to achieve their objectives. Continuity of public services is crucial, and this continuity is sometimes seriously at risk. The regulator must monitor this, preferably preventively. The question is how the regulator can predict these continuity risks earlier in order to intervene more promptly. This has been examined from different angles.

First, it was examined which of four financial ratios best predicted the risks in the following year. Then, it was assessed whether a model based on data from the immediately preceding year performed better than one based on an earlier year. Additionally, the optimal discrimination value in logistic regression was investigated, as well as whether a hierarchical decision structure improves the prediction, and if it makes a difference whether homogeneous or heterogeneous ratio models are used. This was measured using the concept of accuracy, where the balance between Type I and Type II errors is important. As a reference measure, the formal assignment of so-called adjusted financial supervision to institutions by the inspectorate was chosen. The analyses show that the ratio models do not differ significantly in terms of accuracy. However, selecting the correct discrimination value in the regression is crucial. This value must correspond to the proportion of risk cases in the population. A layered, hierarchical decision-making process using two different models does increase accuracy, but with a high discrimination value, the advantage decreases. There is no benefit in using a combination of models with different characteristics from both the profit and non-profit sectors. Although predictions based on the most recent year perform better than those based on a previous year, the difference is not significant. The research shows that it is possible to correctly predict up to 90% of at-risk institutions based on the preceding year. Therefore, it is worthwhile to implement such techniques as part of a broader package.

Vertical integration as a risk

The structure of an educational institution can also present risks. Research has been conducted to determine whether a vertical structure, where a governing body oversees multiple educational sectors, poses a risk. This aligns with a statement made during the Amarantis case: "Secondary education and vocational education (MBO) differ significantly in character; in the long-standing pursuit of continuous learning pathways, this has been overlooked, leading to misdirected efforts." Additionally, it was found that the mergers necessary for this had never truly materialized, and the internal cohesion and shared policies were weakly developed [24,25].

The research focused on whether vertical integration of school boards creates value. This was investigated by examining the progression of students within the educational column, their academic performance, and the financial performance of the institutions. The conclusion is that there are essentially no arguments for vertical mergers. It does not improve recruitment prospects, student outcomes are not better, and the financial performance is clearly worse compared to other boards. The research focused on the two extremes of the spectrum: Complete independence or institutional integration. There are also other, hybrid forms of governance that could not be tested due to insufficient data. Many continuous student pathways are organized in such hybrid forms with relational contracts.

Side effects of the indicators

The interaction between principal and agent, possibly through a regulator, can easily lead to side effects. As the indicators become more important for assessing the agent, these phenomena become more pronounced. And the greater the misalignment between the principal's goals and the method of measurement (i.e., the larger the angle), the more these side effects will increase. This also applies to the examined indicators. The "possession" of a quality management system as a selection indicator can lead to such effects. The research shows that the alignment between this indicator and reality is weak. If merely having any quality management system results in exemption from oversight, this can lead to forms of moral hazard. If supervision is focused on quality management, efforts should be made to find an approach that aligns much more closely with the principal's objectives. This also applies to risk selection based on financial indicators. Moreover, the indicators and the signal values used not only function as a selection mechanism for the supervisor. Because the supervisor uses them, they also acquire a normative status, including for financers. The vertical integration of a school board functions very differently as a risk indicator. Here, we are dealing with a condition of the object of supervision that is

not related to short-term actions. It is more of a contextual variable that indicates a higher risk but, in itself, does not warrant action by the supervisor. Side effects in this case are either non-existent or much less significant.

Applications in practice

Since these studies, educational supervision has further evolved. In 2017, it shifted from being primarily school-focused to an approach centered on governance. Fewer schools are being inspected, and they are no longer considered as stand-alone entities. This creates more distance from the primary educational process, with the risk of weaker alignment. Additionally, a new principal-agent relationship emerges, namely between the school board and the schools. The inspectorate aims to address this by more specifically examining the management relationship between the board and the schools. This is done by mapping out coherent governance and control lines within the board and its schools on several key topics. In this way, quality management becomes the focal point for educational supervision, but the inspectorate also states that this only provides relevant information when it closely aligns with important aspects [26].

Therefore, the inspection is based on themes that are essential to the quality of education. It examines the overall management, execution, and control at and between the governance level and the schools. This approach allows for closer alignment with critical themes and also includes a reality check, including financial aspects. In financial continuity supervision, the application of the analyzed techniques did not lead to the adoption of any of these models. However, the practical utility of the indicators in the inspectorate's risk model was critically assessed, leading to significant adjustments. Using the described techniques, the risk indicators were tested for their predictive power regarding continuity risks. The findings showed that solvency was particularly a strong distinguishing indicator, while some of the used indicators were completely useless. In some cases, the coefficients even had signs opposite to what was expected. The research resulted in a new set of indicators that are much more accurate. Furthermore, institutions are now required to include forecast figures for the next three years in their annual reports, allowing the analysis to look three years into the future. This, however, also introduces the risk of new side effects. The forecast figures are not covered by the accountant's audit statement. If these figures prompt increased scrutiny from the supervisor, it may lead to practices such as window dressing. Comparing the forecasts with the eventual outcomes can provide insight into this issue as well as into governance quality [27].

CONCLUSION & DISCUSSION

Supervision in general, and RBS in particular, depend on the correct indicators for assessing or detecting risks. If these indicators are not well chosen, there will be insufficient alignment, creating numerous opportunities for unwanted side effects. The selection of such indicators must therefore have a strong, scientific foundation. Intuitive assumptions can sometimes prove completely wrong and lead to interventions that are counterproductive. A careful exploration of the possibilities and risks associated with different indicators is thus necessary. There is always the risk of preparing to fight the last war. After the downfall of ROC Leiden, it was natural to focus on risk indicators related to housing. However, the investigative committee demonstrated that by the time such indicators would have detected the risk, the point at which the supervisor could have reversed the situation with regular interventions had long passed. Therefore, it is preferable to conduct more research into the underlying mechanisms rather than reacting directly to current symptoms.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.

REFERENCES

4. Verkroost, J (2016). Indicators for risk detection in Dutch education. Repub Eur Nl.
5. Gibbons, R (2016). Lecture note 1: Agency theory.15903.
6. Baker, GP, Gibbons R, Murphy KJ (2002). Relational contracts and the theory of the firm. Econ J. 117, 39-84.
7. Dixit, A (2002). Incentives and organizations in the public sector: An interpretative review. J Hum Resour. 37, 696-727.
8. Shapiro, SP (2005). Agency theory. Annu Rev Sociol. 31, 263-284.
9. Constitution for the kingdom of the Netherlands. (1815).
10. Ministry of education, culture and science. Primary Education Act, (1981).
11. Knippenberg H, Ham WVD (1994). A source of ongoing concern. 75 years of ministry of education [arts] and sciences 1918-1993. Van Gorcum. 902-32-284-05.
12. Council of inspectors general. (2006).
13. Ministry of the interior and kingdom relations. Nat govt. (2005).
14. Ministry of education, culture and science. Education Supervision Act. (2002).
15. Tirole, J (1986). Hierarchies and bureaucracies: On the role of collusion in organizations. J L Econ and Org. 2,181-214.
16. Black, J (2010). Risk-based regulation: Choices, practices and lessons being learnt. OECD (Ed). 185-236.
17. Velders, R, Brunia M (2013). Conceptual framework for government inspections. Inspection Council.
18. Center for crime prevention and security. Veiligheid. (2010).
19. Smeets, G, Verkroost JJH (2011). Selective and decisive. Working with the WOT (2000-2010). Inspectie van het Onderwijs.
20. Ordonez, LD, Schweitzer ME, Galinsky AD, Bazerman MH (2009). Goals gone wild: The systematic side effects of over-prescribing goal setting. Harvard Business School. 9-83.
21. Wolf IFD, Janssens F (2005). Effects and side effects of inspections and accountability in education. Amsterdam: UvA; Universiteitsbibliotheek. 53/05.
22. Winter, H, Struiksma N, Hollander M (2015). The selectivity, efficiency and effectiveness of risk-oriented supervision under the WOT. Groningen: University of Groningen. 1-30.
23. Wolf, ID, Honingh ME (2014). Risk-oriented supervision is not free from risks. Dutch School Public Administration. 45-58.
24. Ehren, MCM, Honingh MC (2011). Risk-based school inspections in the Netherlands: A critical reflection on intended effects and causal mechanisms. Stud Educ Eval. 239-248.
25. Verkroost, J (2017). Does quality assurance predict the performance of secondary education institutions? In People Society. 35-63.

26. National Institute of Standards and Technology. ASQ. (1998).
27. Verkroost, J (2016). Do vertical school boards have advantages? Value creation through vertical integration between primary, secondary and vocational education. DJELP. 26-48.
28. Committee investigating financial problems of amarantis. Committee Investigating Amarantis' Financial Problems. (2012).
29. Baker, GP (2000). The use of performance measures in incentive contracting. AER. 415-420.
30. Committee to investigate ROC Leiden housing. NDFR. (2015).