



FACULTEIT ECONOMIE
EN BEDRIJFSKUNDE

HOVENIERSBERG 24
B-9000 GENT
Tel. : 32 - (0)9 - 264.34.61
Fax. : 32 - (0)9 - 264.35.92

WORKING PAPER

Management Reform in Flemish Local Authorities: Testing the Institutional Framework

Paul WINDELS¹

Johan CHRISTIAENS²

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¹ Department of Accountancy and Corporate Finance, Ghent University, Belgium; Assistant - Paul.Windels@UGent.be

² Department of Accountancy and Corporate Finance, Ghent University, Belgium; Director Accounting Research Public Sector Ghent University & Ernst & Young; Chartered Accountant Ernst & Young Public Sector - Johan.Christiaens@UGent.be

ABSTRACT

This research empirically examines the process of organisational change through management reform (New Public Management) by an examination of the level of compliance with the reformed management regulations. A management index is constructed and applied on a sample of 100 Flemish local governments using a questionnaire, their annual accounts and interviews. The institutional framework proves to be a useful base for considering the level of adoption and testing cross-sectional differences on a number of explanatory factors. This study reveals that in practice the level of adoption of the governmental reform is restricted and mediated by both local organisational aspects and wider institutional influences.

1. INTRODUCTION

During the last decades the public sector of many countries is flooded with a radical wave of financial, organisational and managerial reform initiatives (see, for instance, Pollitt and Bouckaert, 2000). Generally, references are made to the New Public Management (NPM). NPM is used as a handy shorthand for indicating the lessening differences between the public and the private sector and the shift in emphasis from process accountability towards a result-oriented accountability (Hood, 1995: 94). In Flanders, the first public sector reforms made their entrance in the nineties in local government. Preceded by the accounting reform in the municipalities, the most far-reaching programme of reforms was enacted in relation to the Official Centres for Mutual Welfare (OCMWs¹), which represent local governments next to municipalities. Apart from the adoption of accrual accounting, a wide-ranging array of new management instruments were introduced in OCMWs, hereafter called local governments, at the end of the nineties (see table 1). While NPM probably is to be regarded as a doctrine with a temporary tenability, its 'doctrinal components' still provide a sound base for examining management reform. According to Hood (1991), NPM is associated with approximately seven dimensions of organisational change. In table 1 the context of the components is discussed and applied in the case of a recent reform in the Flemish local governments. This article focuses on the prescribed set of businesslike management instruments which local governments had to adopt.

INSERT TABLE 1 ABOUT HERE

As shown in table 1, the shift to the so-called 'new managerialism' (Pollitt, 1986; Painter, 1998) has given rise to eight elements: administrative manual, long-range planning, budgeting, budget controllership, activity centres, cost accounting, management reporting and auditing (internal and external). Clearly, in most respects the reform agenda is consistent with the principles of New Public Management, according to Hood (1991; 1995). Based on these dimensions this article will examine organisational change from an empirical point of view. What has happened since the implementation of the 1997 Decree? To which extent has the adoption of the new techniques taken place in the real world? Are there any differences between the local governments and if so, what are factors that account for this local variation? These questions broadly outline the interests of the current research.

First and foremost, this study attempts to offer an acceptable solution for the ongoing demands for conducting reform evaluations and their various conceptual problems. By taking

the level of compliance with the regulative requirements as a point of departure, the study wants to present a useful method to examine reform adoption. Secondly, the study aims to contribute to the understanding of organisational change by determining important explanatory factors for the level of adoption. To construct a research framework that underpins the different hypotheses, the study draws largely on the insights of the institutional theory and related studies, as well as on the signaling theory. On the one hand, the study assumes that organisational change flows from individuals' rational choice to deliberately take purposive actions. On the other hand, the contextualist point of view is embraced assuming that both local institutional dynamics as well as more complex inter-organisational relationships have a role to play in management reform of local governments. In short, the purpose of this article is not to investigate thoroughly reform implementation in particular organisations looking at specific processes, but to obtain a total idea of the reform adoption in local governments and map possible factors of influence.

This paper unfolds along the following lines. First, the notion of compliance and the broader context of organisational change are considered with respect to examining management reform. The institutional theory and its relevance to the research interests are explained in more detail. Next, the research design is formulated including the research hypotheses and the setting up of a management index, which is used for the examination. After the presentation of the method and the results from the data analysis, the remainder of the article is devoted to the discussion and conclusions resulting from this project.

2. ASSESSING MANAGEMENT REFORM

2.1 Notion of Compliance

It is a commonplace of the NPM literature that reform evaluation may have a variety of purposes and may be conducted across a wide range of levels using different research techniques (see, for example, Pollitt, 2002). Arguing that already substantial attention has been devoted to the ideological and instrumental aspects of reform adoption, nowadays many researchers are shifting their focus to the actual practices, the impacts and the outcomes of the implemented programmes (see, for instance, Van Helden and Jansen, 2003). Yet inspection of the key literature in a number of countries seems to show that, after more than two decades of NPM-style change, still poor attention has been paid to the construction of a sound instrument for conducting a broad-scope evaluation. As Pollitt (1995) argues it seems that in general researchers are very concerned with the conclusions of their assessments, interesting though they are, but not so much with the strength of their foundations. Particularly, Pollitt (1995: 139) identifies a set of difficulties to overcome when conducting a large-scale evaluation. Some of these are, for example, the criteria to be used for evaluation, the baseline for comparison and the multifaceted nature of NPM. To overcome these problems the current study draws on the level of regulatory compliance and constructs a 'management index' to conduct a large cross-sectional assessment. The concept 'compliance' mainly relates to explicit requirements as prescribed by the legislation but also includes some implicit recommendations as put forward in related studies. With this last notion the study wants to verify if changes actually take root in the management and the practices of the organisation. By taking the notion of compliance as a baseline the study aims to make a formal comparison of the adopted NPM ideas and instruments in Flemish local governments with the reform requirements as prescribed by legislation. As governments are obligated and accustomed to conform with all sorts of regulations, regulatory compliance seems an evidential starting point for examination. Especially in a governmental context compliance with the regulations can be seen as a sort of *conditio sine qua non* for a further successful implementation. The index methodology has proven to be a useful method for this as it permits a general research of a plethora of reform

aspects (see, for instance, Christiaens, 1999). By quantifying the extent of reform adoption the study does not intend to make a formal evaluation of the individual organisations, but rather aims at a more neutral ‘examination’ of the imposed instruments at a certain point in time. In addition, it is expected that the local governments will differ in the extent of adoption of the new techniques. This assumed variation in reform adoption is considered as being relevant as the institutionalization and success of a reform programme often depends on certain important determinants. Therefore, it will be made possible to capture this variation and investigate the relationship between the level of adoption and important characteristics in a systematic way.

2.2 Perspectives on Change

As this research attempts to investigate to what extent local governments innovate and which aspects have to be considered when implementing a reform, another threshold to cross is the concept of change. Why do organisations introduce changes and what is change *tout court*? When reviewing literature on the concept of change and innovation one can find ample examples of theories and ‘extensions of’ theories dealing with the nature, the reasons and the management of this object of research (for example, Burns and Scapens, 2000; Quattrone and Hopper, 2001; Painter et al., 2003). Often a distinction is made between formal organisational change delineating the establishment of new organisational instruments and institutional change pointing at the processes through which the new instruments and practices become embedded and function as new institutions within the social structure. Clearly, the current research concentrates on the more formal dimensions of organisational change.

With respect to the reasons and the dynamics of change this study takes an institutional approach, still leaving room for proactive changes following interaction between context and action (Burns and Scapens, 2000, Pollitt, 2002). The traditional functionalist considerations of economic efficiency and effectiveness are not considered adequately to explain why local governments are engaging and converging in an imposed reform programme. The view is supported that at the local level regularized organisational behaviour is not solely the product of economic decisions, but is largely shaped by institutional factors, i.e. norms, values and taken-for-granted assumptions that root in the institutional context (Meyer and Rowan, 1977: 356-357; DiMaggio and Powell, 1991: 27; Greenwood and Hinings, 1996: 1025). However, the individual motives of the executives responsible for developing and adopting the management instruments do not have to become obsolete in the interpretation of the organisational change process. The reform literature has indicated that changes sometimes are motivated by a personal striving of the executives for more ‘sufficient’ economic results (see, for instance, Vaivio, 1999; Ter Bogt, 2005) or by a wish to express its competence to the local council (see, for instance, Giroux and McLelland, 2003). As discussed in the following section, the institutional theory delivers a broad framework to explain the changes in the organisations’ structures. Apart from institutional aspects signaling theory incentives will be called in.

2.3 The Institutional Theory

Understanding the causes of divergent organisational change has emerged as one of the dominant themes within the change literature (see, for instance, D’Aunno et al., 2000; Amis, Slack and Hinings, 2004). Institutional theory has proven to be a powerful framework for understanding both individual and organisational action (Dacin, Goodstein & Scott, 2002). While the new institutional theory usually is regarded as an explanation of the striking similarity and stability of organisational forms and practices within a functional organisational field (Scott, 1987; DiMaggio and Powell, 1991), the over-emphasis of

organisational passivity and conformity has been criticized (see, for example, Powell, 1991; Greenwood and Hinings, 1996). According to Clegg (1990: 174), cross-sectional differences 'result from the interplay of local culture and context specificities with the process of institutional framing and regulation which derive from the state and other agencies of rationalization.' Recent conceptual papers (see, e.g. Burns and Vaivio, 2001; Dacin, Goodstein and Scott, 2002) and various in-dept studies (see, e.g. Kostova and Roth, 2002; Lowndes and Leach, 2004) endorse the importance of different contextual levels in constituting change. Including old institutional theory restores the attention for micro-level action by bringing aspects such as rules, habits, values, power structures and negotiations back into play (Hirsh and Lounsbury, 1997). New institutional theory provides additional understandings of the agent's cognition. Powell and DiMaggio's model of isomorphism (1991) delivers interesting avenues for explaining compliance and gaining legitimacy as a function of coercive, mimetic and normative pressures in the external environment. From this perspective organisational change can be considered merely as a symbolic response to the change in the environmental expectations or the formal rules. One can assume that organisations try to become isomorphic following the institutionalized rules to obtain legitimacy and secure their survival (Lowndes, 1996) or to appear modern (Premfors, 1998; Pollitt, 2002). Lowndes (1996: 185) further states that public service organisations are particularly susceptible to such a 'contagion of legitimacy' (Zucker, 1991: 105), because they lack private sector-style 'bottom lines' on which to judge performance.

With respect to the outcomes of the process of institutionalization rather divergent organisational change instead of overall compliance can be expected. Such change is possible when heterogeneous institutional elements, inconsistent with the dominant model, have risen to prominence (see also Oliver, 1991, 1992). Looking at the legislative documents it appears that the newly imposed institutions are quite numerous and rather distinct from traditional organisational practice. Next to it, Hinings et al. (2003) argue that organisational change can follow divergent paths, because of the impact of institutional uncertainty that organisations face. Moreover, they point at the uncertainty in working out responses to cognitive, normative and regulative constraints and opportunities. Furthermore, they claim that the political process takes a central role in producing continuing uncertainty in the change process. Because a major restructuring of local governments takes many years, the political timelines for demonstrating change and the shorter-term nature of governmental decision-making may invoke a changing attitude towards the implementation problems and issues (Hinings et al., 2003). Hence, one could expect that it will take time, even several years, to implement and adjust to each of these changes (Ter Bogt, 2005).

In institutional terms, understanding change and responses to a regulatory reform is about understanding 'variations in response to the same coercive pressure'. This can only be done by analyzing features of organisations that succeed to comply with the plethora of reform measures (Greenwood and Hinings, 1996). Governmental change can be seen as a formal organisational restructuring, but in reality change evolves through a complex interaction of formal and informal dimensions (Lowndes and Leach, 2004). By addressing the interplay between local technical and financial aspects and wider environmental influences in a broad institutional framework a more complete account for understanding organisational change can be provided.

3. RESEARCH DESIGN

On the whole, the aims of this study are, firstly, to define the extent to which the instrumental reform has taken place and, secondly, to explain governmental practices which lead to inferences concerning differential adoption practices across governments. Mainly

drawing on a large scale local authority survey the research design lends itself to a systematic testing of hypotheses. In the following a number of hypotheses related to the process of organisational change are formulated and briefly discussed. The construct of the management index for examining level of reform adoption is considered thereafter.

3.1 Constructs and hypotheses

As argued before, this study postulates that reform adoption occurs due to the multiple interlacements between local organisational aspects and the wider social and institutional forces that surround it. The assumption is made that both local technical and financial aspects as well as wider environmental influences might feasibly be associated with alternative implementation scenarios adopted by different local governments. Based on previous and current research a number of related hypotheses are formulated and grouped into one of the following categories: technical aspects, financial aspects and inter-organisational influences. As such, attention is paid to both micro-level actions and wider contextual influences within a broad institutional framework to provide a more adequate explanation of the adoption process. Figure 1 shows the research framework drawn for the study representing the hypotheses and the variables used for analysis with expected signs for the univariate testing.

INSERT FIGURE 1 ABOUT HERE

A first set of propositions relates to a cluster of technical aspects assumed necessary for putting in place the change programme at the local organisational level. These aspects relate to the practical adoption of a new institutional design and should account for local variability. In particular, this study focuses on the capacity for action, i.e. the ability to manage the process from one template to another and considers this as an important enabling dynamic for realizing radical change (Lapsley and Pettigrew, 1994; Greenwood and Hinings, 1996; Hepworth, 2003). According to Greenwood and Hinings (1996) this comprises a sufficient understanding of the new conceptual designation, the skills and the competencies required to function in that new designation and the ability to manage how to get to that designation. Stated differently, capacity to change requires enough skills and competence within the organisation and their mobilization through the act of project leadership (Greenwood and Hinings, 1996; see also Housden, 2000; Newman et al., 2001). As such, this study hypothesizes the general level of education of the executives and their staff, the amount of specific training and the provision of project leadership will positively affect the level of reform adoption.

The general level of education is split up and surrogated by the compound average of finished studies and the average level of advanced studies in public administration. Specific training is measured by taking the compound average of training received in accounting, management and information technology related to the reform. With respect to project leadership, as Hartley and Allison (2000) suggest, a distinction is made between the person (personal characteristics of a leader), the position (formal position in an organisation) and the processes (dynamic processes occurring among and between individuals, groups and organisations). In this paper good project leadership is seen as a combination of an assigned project leader in the executive position (secretary or treasurer), which provides communicative leadership.

H_{1(a)} The general level of education of the executive and their staff positively affects the level of reform adoption.

- H_{1(b)} The level of reform related training of the executive and their staff positively affects the level of reform adoption.*
- H_{1(c)} Good project leadership positively affects the level of reform adoption.*

A second set of propositions relates to financial aspects of the local government organisations. Several studies show that ‘financial stress’ factors foster the adoption of new management techniques (see, for instance, Van Helden, 2000). However, the Flemish reform initiative is not introduced with budgetary cutbacks or explicit financial restrictions. Actually, there were no financial incentives at all for the local authorities to improve or to change their (financial) management style. So, if a local government organisation displays a sound financial management, it could be more an indicator for the professional practice of the executives. In this way, the executives of local authorities can be viewed as professional administrators hired by and serving at the pleasure of the council, and seeking to signal competence to the council or to regional and national peers (Giroux and McLelland, 2003). Based on the signaling theory and related studies (see, for example, Ingram, 1984; Evans and Patton, 1983) it is hypothesized that local governments with a sound financial management will show a higher tendency to change management style by adopting the reform. As the local governments under study are strongly dependent on politically driven financial support coming from other governments (i.e. municipalities), financial independence could be regarded as another important explanatory factor for the way the executive behave as. Not only can financial independence be associated with management competence, it also may point at a situation in which the executive could experience less constraints and exercise more discretionary power in their actions. As a result one can assume a more strategic approach in the management of organisational change will evolve. Over time, these new reform techniques could function as a new institutions more independent organisations are willing to embrace in their striving for legitimacy.

As an indicator of the financial condition, this study takes the financial viability of the local government organisations into account (see also Giroux and McLelland, 2003), here measured by the ratio of earnings before interests (and taxes) divided by financial costs (Ooghe and Van Wymeersch, 1999). As a surrogate for financial independence the ratio of the municipal contributions divided by the general fund revenues is taken.

- H_{2(a)} Financial viability is positively associated with the level of reform adoption.*
- H_{2(b)} Financial independence is positively associated with the level of reform adoption.*

A third set of hypotheses attempts to shed some light on inter-organisational influences that might affect the responsiveness of the local governments to the reform. Previous studies (Christiaens, 1999) investigating accounting reforms in local governments revealed that the professional support of consultants is a positive factor in explaining the level of adoption. This study aims to test the influence of professional support from consultants. Different studies (see, for instance, Newman et al., 2001; Painter et al., 2003) stress the importance of local political backing as one of the major conditions of local change. As local councils are firstly and foremost political bodies, their support is assumed incontrovertible as the councillors will have to accept the need and benefits of the reform and support its implementation. Hepworth (2003: 40-41) states that apart from the local council the responsible higher authorities and the external audit each will need to have the technical ability, but also the operational capacity to introduce and support the changes. To this end the Flemish government has established a special helpdesk (the NGOB-cell). The external audit is also expected to support the practical adoption of the reform.

The level of support of consultants is measured by a compound average delineating the extent and frequency of support with regard to the development of the administrative manual

and the internal audit activity and the preparation of the annual reports. The level of support from the helpdesk is taken by the average number of consulted services. Support from the local council and the external audit is measured each with 10 statements about actions, attitudes and interests that capture the extent of support and involvement.

H_{3(a)} Professional support from consultants positively affects the level of reform adoption.

H_{3(b)} Local political support positively affects the level of reform adoption.

H_{3(c)} Support from the special helpdesk positively affects the level of reform adoption.

H_{3(d)} Support from the external audit positively affects the level of reform adoption.

The variables used for analysis are summarized in table 2, with expected signs for the univariate testing.

INSERT TABLE 2 ABOUT HERE

3.2 Management Index

In institutional literature the response of organisations to change has been investigated and operationalised in different ways. Usually case studies (see, for example, Newman et al., 2001; Townley, 2002) and/or different response categories are constructed (see, for example, Bigelow and Stone, 1995; Casile and Davis-Blake, 2002). In this study the level of adoption will be measured by the construct of a ‘management index’. For the construction of this instrument the study draws on the former concept of the compliance index (Christiaens, 1999). This concept is originally based on Ingram's disclosure index (1984) applied in the disclosure of accounting practices of US state governments. This approach broke new ground in governmental accounting research and has directly or in a modified way been used in a number of similar accounting studies (see, for example, Coy and Dixon, 2004). Coy et al. (1993: 122) define the approach as the Index Construction Methodology, a term to bring together ‘instruments designed to measure a series of items which, when aggregated, gives a surrogate score indicative of the level of compliance, disclosure, accountability, etc... in the specific context for which the index was devised.’ Here, the management index is constructed to measure the level of compliance with the requirements as stipulated in the management legislation of the local governments and considers this to be a proxy of the extent of adopting the reform. In total the index consists of eight main categories and 97 elements constituting 23 NPM practices. These elements are set up to deliver a representative picture of the different facets and prescriptions of the governmental reform as retrieved in the legislative documents. By exception the stipulations concerning the external audit are not included in the index. The reason for this is that external audit is organized by supervising bodies (i.e. the provinces) and as such the (non) compliance with external audit cannot be attributed to the local governments themselves. For a limited number of items, the information could be directly obtained from the annual accounts 2001. Most elements are measured qualitatively and dichotomously. Some of the elements are measured quantitatively. Table 3 gives a detailed overview of the elements of the management index and their method of measurement.

INSERT TABLE 3 ABOUT HERE

Determination of the relevant categories and items of the index has taken place in three steps. The first step was a thorough examination of the relevant legislation and related reports and studies. Based on this step a first draft list of possible categories and items was set up. In the second step, with due care a questionnaire was compiled from the draft list and submitted to practitioners by the way of an in-dept interview. In the third step, the questionnaire was further adjusted and fine-tuned as it had to serve as the main source to collect the necessary data for the management index. The selected respondents were officials in charge of the financial and general management of the local governments (i.e. the secretary and treasurer). The purpose of the interviews was twofold. Firstly, the interviews were meant to extract additional ideas, determine the relevancy of the items and to detect additional items. Secondly, the questionnaire itself was tested on comprehensibility and accuracy.

One should be cautious with unintended misinterpretations when observing the results of the management index. Firstly, the index only gives a surrogate score indicating the level of compliance and as such not representing an opinion statement in terms of success. Secondly, legal and instrumental compliance mainly show the extent of formal organisational change. Despite the extension of the compliance-concept, the index scores only give a restricted picture of the actual practices in the organisations. However, being in compliance with reformed management regulations could be seen as a necessary condition for obtaining a successful adoption. Thirdly, the index and its components are based on a limited set of items as retrieved in the legislation and regulations. These categories give no indications of the relative importance of the different reform aspects in practice. Lastly, the usefulness of a total index score can be questioned. Not only does the literature on change processes suggest a considerable time span to implement a major set of changes, governments often implement different technical aspects in sequential 'shifts' (Ter Bogt, 2005). As a result the index will be mainly used to focus on the different aspects of the reform programme and the determinants of variations in the levels of change.

4. METHODOLOGY

The research project uses three major types of data. Firstly, a questionnaire survey is issued to the treasurers of the local governments. Essentially, the survey represents the operationalisation of the management index described earlier. Secondly, *archival data* are gathered for some specific items. A copy of the annual report and the trial balance in 2001 are used. These archival data have not become obsolete as the items of interest are related to rather static aspects of the change process. Lastly, a series of interviews are conducted to discuss the findings and the proposed conclusions with ten treasurers. Instead of being redundant, these three different kinds of data of which certain elements can be matched, enhance triangulation which may improve the validity of the study. The research is based on a random sample of 100 governments which already have started to implement the reform between 1998 and 2001 out of a population of 308 local governments. The data analysis mainly concentrates on the adoption of the different facets of the reform and on the characteristics of the local governments. Apart from the descriptive statistics, ordinary least squares regression analysis is used to test possible reasons and associations with the varying management practices.

5. DATA ANALYSIS

The respondents were fairly willing to participate; by means of an intensive follow-up (third requests and telephone calls) the archival data could be gathered for 83 governments while totally 86 returned the survey.

5.1 Main Results of the Index

The main figures related to the management index and its 8 constituting components are shown in Table 4. The total extent of management scores ranges from a high of 65 per cent of the maximum possible score to a low of 18 per cent. On average, each organisation reported 16,8 management compliance items or 39,9 per cent of the maximum possible compliance total of 42 the organisation is expected to earn. Hence, one could make the quick conclusion that in general local governments signal a low level of compliance with the prescribed management reform. Moreover, the maximum score of 65 per cent could indicate a structural problem, because the local governments do not succeed in full compliance with legal requirements. Although, for every element of the management index, there appears to be at least one authority scoring the maximum. This reveals that, from a theoretical point of view, it is possible that a local government reaches a management index of 100 per cent.

INSERT TABLE 4 ABOUT HERE

Looking closer at the different components of the management index varying compliance scores can be observed. For three categories a general positive compliance score is found (i.e. long-range planning, budgeting and activity centres). For the 5 other categories the adoption of the management reform appears to remain rather poor. Among the worst performers are the categories budget controllership and internal audit. On the whole, one could conclude that the adoption of the new management instruments is stuck on a moderate level and governments apparently have paid attention to some specific components of the NPM reform. Moreover, the findings suggest that the quality and the success of these changes are doubtful and probably much lower than intended and expected at the start of the initiative. These characteristics are consistent with those previously identified in prior work on Flemish municipalities (Christiaens, 1999).

5.2 Factors Affecting the Index

Table 5 reports the OLS regression results. The observed F-statistic of the regression is 4,566 and significant at $\alpha = 0,000$ which points at an acceptable goodness-of-fit. The validity threat of multicollinearity is examined with a Pearson correlation test and by calculating the tolerance and variance inflation factors for all the independent variables. No indication of multicollinearity is found between the different variables. Regression residuals tests for normality and constancy of variance and a check on the existence of outliers indicate no significant distortions from the assumed regression conditions. An interpretation of the proposed model seems to be appropriate. The model has three significant variables with the theoretically expected sign, TRAIN, PROJL and POLSUP. A trend can be observed for the variables EDU and CONSUL while, although not significant, a negative relationship is shown for three of the remaining variables.

INSERT TABLE 5 ABOUT HERE

The regression provides persuasive results for the proposed hypotheses concerning the technical aspects. TRAIN ($\alpha = 0,05$), EDU ($\alpha = 0,10$) and PROJL ($\alpha = 0,01$) all are

significant. While more a 'trend' is observed for the general level of education (EDU) authorities with the attribute of specific training in reform related matters (TRAIN) show significantly higher levels of compliance. Moreover, the implementation of good project leadership (PROJL) is a very important explanatory factor of the management index. With respect to the inter-organisational influences a trend is found for CONSUL ($\alpha = 0,10$) measuring the average level of outside support from consultants. The findings support a significant positive affection of the management index ($\alpha = 0,01$), confirming the hypothesis that political support (POLSUP) is a positive indicator. However, the variables HELPD as an indicator for the support from the regional helpdesk and AUDQ measuring the perceived quality of the external audit are not significant. Hence, support from higher authorities seems not to be associated with the management index. Concerning the financial aspects the findings indicate no significant relationship for the proposed hypotheses. In this study financial factors do not seem to deliver a powerful explanation for the cross-sectional differences.

6. DISCUSSION AND CONCLUSIONS

6.1 Research Findings

In general, the empirical research findings indicate that the level of adoption and the quality of the new management instruments in Flemish local authorities are realised only to a limited extent. The data suggest that local governments experience adoption difficulties in complying with the NPM reform. On the other hand, some reform aspects put on show relatively higher scores (i.e. activity centres, budgeting and long-range planning). It seems as if management turned its attention deliberately to some specific management aspects while ignoring the others. One could argue that the accounting related aspects of the NPM reform have received more attention. As those reform aspects are under a stricter supervisory attention within the reporting process, they are probably related with some coercive pressure to comply. Although it is quite difficult to identify the effects on managerialism, which can be related exclusively to the current reform also a history effect has to be taken into account. For example, as governments are historically rooted in a financial environment encapsulated by a budgeting process it seems logical that the transfer to a new budgeting system would gain ample attention. One can also assume that governments already could have found ways of experimenting with business tools, apart from regulatory demands. These arguments could be set forward for the more formalistic aspects such as the division in activity centres and long-range planning, which are tools many governments already could have implemented without the aid of the project. From an institutional point of view the findings indicate that some adjustments in practice can mainly be regarded as a response to an external change in the formal expectations. The extent and the quality of adoption of some instruments (i.e. activity centres, long-range planning, budget controllership) clearly indicate that local governments are merely trying to fulfil the new requirements in search for legitimacy than to actually improve their decision-making and control mechanisms. Budget controllership was often implemented but not in the way intended by the legislator and consequently shows a generally low compliance score.

The cross-sectional differences in the level of adoption reveal that there are certainly some significant enablers and constraints in the process of organisational change. The importance of inter-organisational influences such as professional support from consultants and direct support from the council corroborate that organisations are connected with their wider institutional surroundings in processes of renewal. At the same time substantial evidence is found for the impact of local internal dynamics in managing the shift. Especially, the general level of education, the specific competence of the staff and the installation of thorough project management significantly improve the adoption process. Although the significance of financial aspects is tested, only weak correlations have emerged. Interpreting these findings,

one could claim the importance of a professionally skilled workforce made accustomed to the new practices and policies, understanding and supporting the alteration in the underlying meanings of their work. While this can be enacted by the means of sound project leadership and outside professional support, one is not to oversee the reform's political nature (Skelley, 2002).

6.2 Executive Perceptions on the Adoption Process

In order to discuss and fine-tune the stated findings and conclusions of this research, additional interviews were organized with ten treasurers of the examined local governments randomly selected. This related research provides indications that management has devoted relatively more energy into the new accounting system and the linked aspects than in the management reform. The reasons that were mentioned for the adoption of the management instruments varied. Some interviewees indicated that they felt a need to improve the adequacy and the effectiveness of their organisation or to appear more 'modern'. In general, the legislative requirements were pointed as the main drivers for change. With respect to the actual use of the new instruments mixed results were found. Sometimes the interviewees did not see the point of some new techniques (for example, an administrative manual; quarterly reporting) because of the limited size of their organisation. Regarding some instruments many interviewees showed some resistance (i.e. budget controllership) or claimed a rather formal adoption (i.e. long-range planning, management reporting). Nearly all of the interviewees responded to be familiarized with the new instruments and most of them recognized that the adoption demanded many efforts. Especially, the development of the administrative manual was considered as a difficult and time-consuming task. Many interviewees tackled the lack of involvement from higher authorities and some claimed an insufficient capacity to implement the reform properly. All in all, the interviewees regarded the management reform as a positive initiative and most of them were satisfied with the rate of progression.

6.3 Accounting for Institutional Inertia

Following Deephouse and Carter (2005), the institutionalist perspective might provide an acceptable explanation for the generally restricted level of adoption. When adopting reform, organisations are trying to conform to new strategies, structures and practices in order to appear rational to the wider social system and to become generally acceptable (Fligstein, 1991; Tolbert and Zucker, 1983). Usually these strategies, structures and practices emerge from interactions of leading organisations within the institutional field (see, for example, Washington, 2004). In the case of a regulatory reform another process is taking place since the new institutions are imposed by the state, considered as a powerful entity exercising coercive pressures to conform (Scott, 1995). One can expect public organisations to comply with legislation to obtain legitimacy and (financial) security. However, if a deviation from the cultural and legal expectations does not deliver the organisation a legitimacy problem, additional drivers are deemed necessary to create institutional change as institutional inertia is likely to prevail. The current case seems to deliver a good example of the suggested course of action, as indicated by three additional explanatory factors.

Firstly, it seems that the elected officials have been taking an 'ideologically acceptable reform model of the shelf' (Lowndes and Wilson, 2003) without any further interest for the institutional arrangements. The modernization agenda, centrally developed, has been imposed top-down without any concerted attempts to involve local government or the public. Secondly, central government's approach to institutional reform is characterized by a general lack of interest and commitment to actually enforce and guide the implementation. Apart from a number of formalistic requirements related to the annual reporting obligations, rigorously checked by the

external audit, higher authorities are not exercising due monitoring activities on the adoption process. Thirdly, local authorities themselves are not very concerned with a situation of non-compliance as the funding process, directly related to their financial results, takes place at the municipal level within the political-administrative system. Taken into account the low levels of accountability, the ineffective system of enforcement and the few incentives that might enhance compliance it is not very surprising that the level of NPM adoption progresses at a low pace.

6.4 Summary and Implications

Although the management reform project is recognized as a major movement for change in local governments, this does not guarantee the degree to which changes were actually realized. Initiated by the Ministry of Home Affairs and enacted by a new general law on local governments, the adoption itself was transferred to the local level soon after it started. By means of an empirical investigation a general examination is conducted mainly investigating the extent to which various reform aspects are adopted in practice, some years after regulatory change. In general terms the management reform can be considered difficult although some new management techniques have become embedded.

This research took off by stating that assessing management reform is a difficult undertaking if the objective is to make a fair statement without losing sight of numeral evaluatory hurdles. By constructing the management index the current research has prepared a reliable and transferable instrument for empirical examination. The study proposed the use of a broad institutional model for the assessment of reform adoption by emphasizing the importance of both local organisational aspects as well as the larger institutional field when considering organisational change, and the results have indicated different significant effects when taking these aspects into account. Finally, the research offered plausible explanations for the presented pattern of changes within the proposed model.

All in all a continuing reform of the examined Flemish local governments is expected. The newly imposed management instruments seem sustainable but the governmental organisations will need to cope with the difficulties when introducing and applying businesslike instruments. Improvement efforts need to be initiated and supplemented with new values such as transparency, increased professionalism and accountability to the public in order to enhance real institutional change. Local government should enrol in new initiatives only if they are convinced of a practical benefit to the organisation. On the other hand, central government should be aware of its ability to create coercive isomorphic forces, which can lead to unintended consequences. By mainly imposing a large set of new management and accounting practices through regulatory reform and without or with insufficient further guidance or monitoring a variety of outcomes can be expected of the reform initiative. A major challenge lies in the organisation of a sound and continuing guidance and monitoring process of the governmental organisations under reform.

Referring to Pollitt's framework of convergence (2002: 477), this article mainly has focused on the second level of NPM adoption, the formal instrumental changes. Only limited attention is devoted to the actual use of the newly established instruments in practice and the processes of institutional redesign. In order to obtain a more complete understanding of institutional change through regulatory reform additional research should shed some light on the processes through which newly imposed institutions are diffused and become embedded at the local level.

NOTES

¹ An OCMW (*Official Centre for Mutual Welfare*) is a governmental entity providing a number of additional municipal services such as health care, care for the elderly, social support, etc.

Each municipality is related to just one OCMW and vice versa. In Flanders, being the largest District in Belgium, there are 308 OCMWs.

² Unbundling of the organisations into units organized by product or service.

³ Internal markets and contracting as a key to lower costs and explicit performance standards.

⁴ Clear assignments of responsibilities.

REFERENCES

- Amis, J., T. Slack and C.R. Hinings, 2004, 'The Pace, Sequence and Linearity of Radical Change', *Academy of Management Journal*, 47/1, pp.15-39.
- Bigelow, B. and M.M. Stone, 1995, 'Why Don't They Do What We Want? An exploration of Organizational Responses to Institutional Pressures in Community Health Centres', *Public Administration Review*, 55/2, pp.183-192.
- Bogt, H.J. ter, 2005, 'A succession of changes in the control of Dutch local government organizations', *CIGAR 10th biannual congress, Poitiers, May 26-27*.
- Burns, J. and R.W. Scapens, 2000, 'Conceptualizing management accounting change: an institutional framework', *Management Accounting Research*, 11/1, pp.3-25.
- Burns, J. and J. Vaivio, 2001, 'Management accounting change', *Management Accounting Research*, 12/4, pp.389-402.
- Casile, M. and A. Davis-Blake, 2002, 'When Accreditation Standards Change: Factors Affecting Differential Responsiveness of Public and Private Organizations', *Academy of Management Journal*, 45/1, pp.180-195.
- Christiaens, J., 1999, 'Financial Accounting Reform In Flemish Municipalities: An Empirical Investigation', *Financial Accountability and Management*, 15/1, pp.21-40.
- Clegg, S.R., 1990, *Modern Organizations – Organization Studies in the Postmodern World*, (London: Sage Publications).
- Coy, D. and K. Dixon, 2004, 'The public accountability index: crafting a parametric disclosure index for annual reports', *The British Accounting Review*, 36/1, pp.79-106.
- Coy, D., G. Tower and K. Dixon, 1993, 'Quantifying the Quality of Tertiary Education Annual Reports', *Accounting and Finance*, 33/2, pp.121 – 130.
- Dacin, M.T., J. Goodstein and W.R. Scott, 2002, 'Institutional Theory and Institutional Change: Introduction to the Special Research Forum', *Academy of Management Journal*, 45/1, pp.45-57.
- D'Aunno, T., M. Succi and J.A. Alexander, 2000, 'The Role of Institutional and Market Forces in Divergent Organizational Change', *Administrative Science Quarterly*, 45/4, pp.679-704.
- Deephouse, D.L. and S.M. Carter, 2005, 'An Examination of Differences Between Organizational Legitimacy and Organizational Reputation', *Journal of Management Studies*, 42/2, pp.329-360.
- DiMaggio, P.J. and W.W. Powell, 1991, 'Introduction', in P.J. DiMaggio, and W.W. Powell (eds.), *The New Institutionalism in Organizational Analysis* (Chicago: The University of Chicago Press), pp.1-38.
- Evans, J.H. and J.M. Patton, 1983, 'An Economic Analysis of Participation in the Municipal Finance Officers Association Certificate of Conformance Program', *Journal of Accounting and Economics*, 5/2, pp.151-175.
- Fligstein, N., 1991, 'The structural transformation of American industry: an institutional account of the causes of diversification in the largest firms, 1919-1979', in P.J. DiMaggio, and W.W. Powell (eds.), *The New Institutionalism in Organizational Analysis* (Chicago: The University of Chicago Press), pp.311-336.

- Giroux, G. and A.J. McLelland, 2003, 'Governance structures and accounting at large municipalities', *Journal of Accounting and Public Policy*, 22/3, pp.203-230.
- Greenwood, R. and C.R. Hinings, 1996, 'Understanding Radical Organizational Change: Bringing Together the Old and the New Institutionalism', *Academy of Management Review*, 21/4, pp.1022-1054.
- Hartley, J. and M. Allison, 2000, 'The Role of Leadership in the Modernization and Improvement of Public Services', *Public Money and Management*, pp.35 – 40.
- Helden, G.J. van, 2000, 'Is Financial Stress an Incentive for the Adoption of Businesslike Planning and Control in Local Government? A Comparative Study of Eight Dutch Municipalities', *Financial Accountability and Management*, 16/1, pp.83-100.
- Helden, G.J. van and E.P. Jansen, 2003, 'New Public Management in Dutch Local Government', *Local Government Studies*, 29/2, pp.1-88.
- Hepworth, N., 2003, 'Preconditions for Successful Implementation of Accrual Accounting in Central Government', *Public Money and Management*, pp.37–43.
- Hinings, R.W., A. Casebeer, T. Reay, K. Golden-Biddle, A. Pablo and R. Greenwood, 2003, 'Regionalizing Healthcare in Alberta: Legislated Change, Uncertainty and Loose Coupling', *British Journal of Management*, 14/4, pp.15-30.
- Hirsch, P.M. and M. Lounsbury, 1997, 'Ending the Family Quarrel – Towards a Reconciliation of "Old" and "New" Institutionalisms', *American Behavioral Scientist*, 40/4, pp.406-418.
- Hood, C., 1991, 'A public management for all seasons?', *Public Administration*, 69/1, pp.531–551.
- Hood, C., 1995, 'The "New Public Management" in the 1980s: Variations on a Theme', *Accounting, Organizations and Society*, 20, 2/3, pp.93–109.
- Housdon, P., 2000, 'Turning Strategy into Practice: Organizational Development in the Modernization of Local Government', *Public Money and Management*, 20/2, pp.9 – 13.
- Ingram, R.W., 1984, 'Economic incentives and the choice of State Government Accounting Practices', *Journal of Accounting Research*, 22/1, pp.126-144.
- Kostova, T. and K. Roth, 2002, 'Adoption of an Organizational Practice by Subsidiaries of Multinational Corporations: Institutional and Relational Effects', *Academy of Management Journal*, 45/1, pp.215-233.
- Lapsley, I. and A. Pettigrew, 1994, 'Meeting the challenge: accounting for change', *Financial Accountability and Management*, 10/2, pp.79–92.
- Lowndes, V., 1996, 'Varieties of New Institutionalism: A Critical Appraisal', *Public Administration*, 74/2, pp.181-197.
- Lowndes, V. and S. Leach, 2004, 'Understanding Local Political Leadership: Constitutions, Contexts and Capabilities', *Local Government Studies*, 30/4, pp.557-575.
- Lowndes, V. and D. Wilson, 2003, 'Balancing Revisability and Robustness? A New Institutional Perspective on Local Government Modernization', *Public Administration*, 81/2, pp.275-298.
- Meyer, J.W. and B. Rowan, 1977, 'Institutionalized Organizations: Formal Structure as Myth and Ceremony', *American Journal of Sociology*, 83/2, pp.340-363.
- Newman, J., J. Raine and C. Skelcher, 2001, 'Transforming Local Government: Innovation and Modernization', *Public Money and Management*, 21/2, pp.61 – 68.
- Oliver, C., 1991, 'Strategic responses to institutional pressures', *Academy of Management Review*, 16/1, pp.145-179.
- Oliver, C., 1992, 'The antecedents of deinstitutionalization', *Organization Studies*, 13/4, pp.563-588.
- Ooghe, H. and C. Van Wymeersch (eds.), 1999, *Financiële analyse van de onderneming*, (Diegem: Kluwer/ced.samson).

- Painter, M., 1998, 'After managerialism rediscoveries and redirection: the case of intergovernmental relations', *Australian Journal of Public Administration*, 57/44, pp.44-54.
- Painter, C., K. Isaac-Henry and S. McAnulla, 2003, 'Modernising Local Government: Micro-Organisational Reform and Changing Local Structural Configurations', *Local Government Studies*, 29/4, pp.31-53.
- Pollitt, C., 1986, 'Beyond the managerial model: the case for broadening performance assessment in government and the public services', *Financial Accountability and Management*, 2/3, pp.155-170.
- Pollitt, C., 1995, 'Justification by works or by faith', *Evaluation*, 1/2, pp.133-154.
- Pollitt, C., 2002, 'Clarifying Convergence: Striking similarities and durable differences in public management reform', *Public Management Review*, 4/1, pp.471-492.
- Pollitt, C. and G. Bouckaert, 2000, *Public Management Reform: A Comparative Analysis*, (Oxford: Oxford University Press).
- Powell, W.W., 1991, 'Expanding the Scope of Institutional Analysis', in P.J. DiMaggio, and W.W. Powell (eds.), *The New Institutionalism in Organizational Analysis* (Chicago: The University of Chicago Press), pp.183-203.
- Premfors, R., 1998, 'Reshaping the Democratic State: Swedish Experiences in a Comparative Perspective', *Public Administration*, 76/1, pp.141-159.
- Quattrone, P. and T. Hopper, 2001, 'What does organizational change mean? Speculations on a taken for granted category', *Management Accounting Research*, 12/4, pp.403-435.
- Scott, R.W., 1987, 'The Adolescence of Institutional Theory', *Administrative Science Quarterly*, 32/4, pp.493-511.
- Scott, R.W., 1995, *Institutions and Organizations*. Thousand Oaks, CA: Sage.
- Skelley, B.D., 2002, 'The ambiguity of results: Assessments of the New Public Management', *Public Administration & Management*, 7/2, pp.168 - 187.
- Tolbert, P.S. and L.G. Zucker, 1983, 'Institutional sources of change in the formal structure of organizations: the diffusion of civil service reforms 1880-1935', *Administrative Science Quarterly*, 28/1, pp.22-39.
- Townley, B., 2002, 'The Role of Competing Rationalities in Institutional Change', *Academy of Management Journal*, 45/1, pp.163-179.
- Vaivio, J., 1999, 'Exploring a 'non-financial' management accounting change', *Management Accounting Research*, 10/4, pp.409-437.
- Washington, M., 2004, 'Field Approaches to Institutional Change: The Evolution of the National Collegiate Athletic Association 1906-1995', *Organization Studies*, 25/3, pp.393-414.
- Zucker, L., 1991, 'The role of institutionalization in cultural perspective', in P.J. DiMaggio, and W.W. Powell (eds.), *The New Institutionalism in Organizational Analysis* (Chicago: The University of Chicago Press), pp.83-107.

**Management Reform in Flemish Local Authorities:
Testing the Institutional Framework**

Tables and Figures

Table 1:
NPM and Reform Elements in Flemish Local Governments

<i>Governmental reform elements</i>	<i>NPM characteristics</i>						
	<i>Divisionalization²</i>	<i>Competitive Attitude³</i>	<i>Private-sector management styles</i>	<i>Discipline in resource use</i>	<i>Visible hands-on management⁴</i>	<i>Measurable standards and measures of performance and success</i>	<i>Greater stress on results</i>
Accrual Accounting: a move away from cash-based accounting to 'business-like' accrual accounting.			✓				
Administrative Manual: mapping the administrative organisation (departments, functions, guidelines and procedures) in order to increase efficiency and optimise the administrative organisation.				✓			
Long-range Planning: consists of a strategic and financial note over a time span of minimum 3 to maximum 6 years. Once approved by the municipality the long-range plan can be considered as a contract between the local authority and corresponding municipality.		✓	✓				✓
Budgeting: from incremental budgeting to zero-based budgeting.			✓			✓	✓
Budget controllership: the possibility to delegate the authority to civil servants to manage an output-oriented budget					✓	✓	✓
Activity Centres: business units or economic entities responsible for internal services. Each activity centre has to produce a separate balance sheet and P/L account.	✓	✓					
Cost Accounting: more stress on identifying costs and understanding cost structures of activity centres or departments.			✓	✓			
Management Reporting: responsibilities and output-oriented budgets are monitored by means of quarterly reports.			✓			✓	✓
Internal and External Audit: internal audit consists of legality- and VFM-audit. External audit is limited to financial audit.			✓	✓		✓	

Table 2:
Variables Used for Analysis

Variables		Definition	Prediction
<i>Panel A: dummy variables</i>			
Project leadership	(PROJL)	Dummy variable, where 1 = an appointed project leader and the provision of clear communication about the reform	(+)
Support from consultants	(CONSUL)	Dummy variable, where 1 = the use of a consultant for the administrative manual, internal audit or annual reporting	(+)
<i>Panel B: continuous variables</i>			
General level of education (staff, executives)	(EDU)	Compound average of the level of finished (master, bachelor and secondary level) and specialised studies (in public administration)	(+)
Specific training	(TRAIN)	Compound average of received management, accounting and IT training	(+)
Support from the special helpdesk	(HELPD)	Average number of consulted services from the helpdesk	(+)
Support from the external audit	(AUDQ)	Average level of perceived support from the external audit (10 Likert items)	(+)
Local political support	(POLSUP)	Average level of perceived political support (10 Likert items)	(+)
Financial viability	(FICON)	Earnings before interests (and taxes) divided by financial costs, FYE 2001	(+)
Financial independence	(FIINDE)	Municipal contributions divided by general fund revenues, FYE 2001	(+)

Note: FYE = fiscal year ended.

Table 3:
Elements of the Management Index

Components (Total 42 points)	Code	Measure	Source
A. Administrative manual (9 points)			
1. Approach to development	APPRAM		
Phased approach		Ql	Query
2. Development phase	DEVEAM		
Developed parts		Ql	Query
Administrative procedures		Ql	Query
Flowcharts		Ql	Query
3. Assistance development	ASSISAM		
Internal assistance		D	Query
4. Realistic - Actualisation - Improvement	RAIAM		
Formal procedure for changes		Ql	Query
5. Accessibility	ACCEAM		
Hard-copy		Ql	Query
Intranet		Ql	Query
Explication		Ql	Query
B. Long-range planning (5 points)			
6. Time span	TIMELRP		
Time span most recent long-range plan		D	Query
7. Actualisation	ACTUALRP		
Frequency actualisation long-range plan		Ql	Query
8. Completeness strategic note	COMPLSN		
Content mission		Ql	Query
9. Completeness financial note	COMPLFN		
Developed parts		Ql	Query
Compliance schedules		D	Query
C. Budgeting (5 points)			
10. Swot-analysis	SWOTLRP		
Approach budgeting		Ql	Query
11. Completeness	COMBUD		
Developed parts		Ql	Query
Investment budget		Ql	Query
Compliance schedules		D	Query
12. Participation	PARBUD		
Participation pre-design		D	Query
Budget commission		D	Query
D. Budget controllership (6 points)			
13. Number of vertical budget responsibility areas	VERBUD		
Vertical budget responsibility areas		Qn	Query
12. Number of civil servant budget responsibility areas	CIVILBUD		
Civil servant budget responsibility areas		Qn	Query
14. Function description	FUNBUD		
Content function description		Ql	Query
Insertion in other documents		Ql	Query
15. Accountability	AGRBUD		
Individual task agreement		D	Query

Evaluation task agreement		D	Query
E. Activity centres (3 points)			
16. Activity centres - Concept	ANALAC		
Number of activity centres		D	Balance sheet
Clarification in notes		D	Notes
Division between service types		D	Balance sheet
17. Activity centres - Practice	PRACTAC		
Number of zero-balance totals		D	Balance sheet
Number of zero-result totals		D	Profit/ loss account
Outliers balance total		D	Balance sheet
Size general AC		D	Balance sheet
F. Cost accounting (3 points)			
17. Calculation of costs	CACOST		
Calculation of costs		QI	Query
Implications of cost calculation		QI	Query
Details in notes		D	Notes
Allocation overheads in notes		D	Notes
Internal billing		D	Trial balance
G. Management reporting (3 points)			
18. Completeness reporting	COMPLREP		
Completeness reporting		QI	Query
19. Recipients of (written and/or oral) reports	RECREP		
Recipients written reports		QI	Query
Recipients oral reports		QI	Query
H. Internal audit (8 points)			
20. Frequency internal audit	FREQIA		
Frequency legality audit		D	Query
Frequency VFM audit		D	Query
Frequency financial audit		D	Query
21. Completeness internal audit	COMPIA		
Completeness VFM audit		D	Query
22. Independency internal audit	INDEIA		
Internal assistance legality audit		D	Query
Internal audit commission		D	Query
Internal assistance VFM audit		D	Query
23. Best practices	BESTIA		
Reporting internal audit		QI	Query
Audit charter		QI	Query
Budget internal audit		QI	Query
Marketing internal audit		QI	Query

Table 4:
Main Measures of the Management Compliance By Index and of the Different Components

	Mean	Std. Dev.	Max. Score	Min. Score
Management Index	39,9%	11,4	65	18

Components	Mean	Std. Dev.	Max. Score	Min. Score
Administrative manual	29,3%	22,9	87	0
Long-range planning	66,7%	21,6	100	0
Budgeting	68,9%	19,9	100	33
Budget controllership	13,1%	18,9	65	0
Activity centres	89,7%	12,8	100	50
Cost accounting	47,4%	28,2	100	0
Management reporting	29,1%	19,8	67	0
Internal audit	19,7%	23,6	81	0

Table 5:
Ordinary Least Squares Linear Regression Results for the Proposed Model

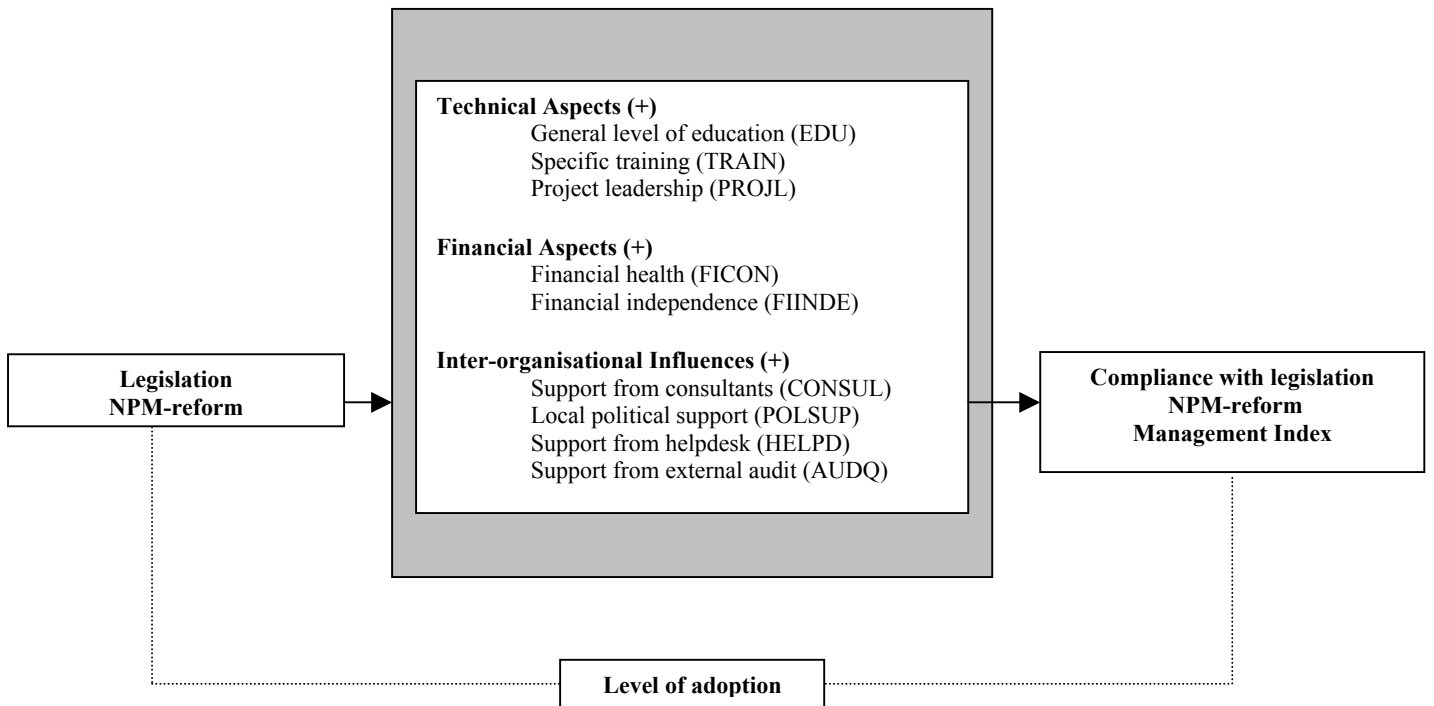
R	R ²	Adjusted R ²	Std. Error of the Estimate	
0,60	0,36	0,281	0,09644	

ANOVA	Sum of squares	df	Mean Square	F	Sig.
Regression	0,382	9	0,042	4,566	0,000
Residual	0,679	73	0,009		
Total	1,061	82			

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	β	Std. Error	β	t	Sig.	Tolerance	VIF
(Constant)	0,113	0,103		1,089	0,280		
EDU	0,034	0,019	0,175	1,760	0,083*	0,884	1,132
TRAIN	0,026	0,010	0,252	2,591	0,012**	0,927	1,079
PROJL	0,094	0,03	0,311	3,142	0,002***	0,893	1,119
CONSUL	0,048	0,024	0,194	1,973	0,052*	0,909	1,100
POLSUP	0,318	0,103	0,313	3,087	0,003***	0,852	1,173
HELDPD	0,033	0,063	0,053	0,523	0,603	0,853	1,173
AUDQ	-0,068	0,100	-0,071	-0,679	0,499	0,807	1,239
FICON	0,000	0,000	0,041	0,425	0,672	0,924	1,082
FIINDE	-0,001	0,052	-0,001	-0,014	0,988	0,967	1,035

Note: Significant at 0.01 (***), 0.05 (**) and 0.01 (*). One tailed test for directional predictions.

Figure 1:
Research Framework





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