

Use of Performance Measurement in the Public Sector: the case of the police service

Patrícia S. Gomes

Assistant Professor, Polytechnic Institute of Cávado and Ave, Portugal, pgomes@ipca.pt*

Sílvia M. Mendes

Associate Professor, University of Minho, Portugal, smendes@eeg.uminho.pt

João B. Carvalho

Associate Professor, University of Minho, Portugal, jcarvalho@eeg.uminho.pt

Abstract:

Many public organisations have been under great pressure in recent years to increase the efficiency and transparency of outputs, to rationalise the use of public resources, and to increase the quality of service delivery. In this context, public organisations were encouraged to introduce the New Public Management reforms with the goal of improving the efficiency and effectiveness of the performance organisation through a new public management model. This new public management model is based on measurement by outputs and outcomes, a clear definition of responsibilities, the transparency and accountability of governmental activities, and on a greater value for citizens.

What type of performance measurement systems are used in police services? Are they multidimensional models with an integration of financial and non financial measures? Based on the literature review, we see that multidimensional models, like the Balanced Scorecard, are important in many public organisations, like municipalities, universities, and hospitals. Police services are characterised by complex and diverse objectives and stakeholders. Therefore, performance measurement of these public services calls for a specific analysis. Based on a nationwide survey of all police chiefs of the Portuguese police force, we find that employee performance measurement is the main form of measurement. Also, we propose a strategic map for the Portuguese police service.

Key Words: *Performance measurement; measures; outputs; outcomes; public sector; police.*

1. Introduction

The introduction of integrated and multidimensional models of performance measurement in the public sector is a consequence of the New Public Management (NPM) reforms. This new model is characterized by the adoption of business tools in the public management and greater accountability in the resources allocation, in order to reduce costs and increase the quality of service delivery. The creation of value for citizens through an efficient and effective management is the basic principle of NPM that justifies the study of performance measurement models for the public sector.

The main proposal of performance measurement, in any organisation, is to improve process decisionmaking (Mayston 1985; Julnes and Holzer 2001; Dooren 2005), and to allow for a

learning process in all levels of the organisation (Jackson 1993). On the other hand, enhancing the quality of public services, following each measurement process, is the main role of a performance measurement system. However, the existing literature refers to the ambiguity in the conceptualisation and definition of efficiency and effectiveness objectives, such as in the production of output and outcome measures (Carter, Klein and Day 1993)¹. Performance measurement is more concerned with outcomes measures and its relationship with outputs measures, in spite of the difficulty in defining this relationship. For example, the measurement of police work is based on the capacity to carry out its operational activities with the available resources (efficiency of outputs) and, on the other hand, it is based on the capacity to increase the level of public safety and to reduce crime (outcomes).

The generalised concern about the diversity of financial and non-financial information is a consequence of the relevance lost with the traditional accounting systems, which are only based on financial information. Nonfinancial information should be integrated in the development of a multidimensional performance measurement model (Jackson 1993; Guthrie and English 1997; Brignall and Modell 2000). The integration of both financial and non-financial information in the management and accounting system improves the adoption and implementation of a performance measurement model (Julnes and Holzer 2001; Dooren 2005).

In this paper, we review the literature on the use of performance measurement and key performance indicators in public organisations, in particular in police services; we also debate about important constraints in the performance evaluation of this specific and complex public service. The central objective is to analyse the use of multidimensional performance measures in Portuguese police system and to propose a strategic map, based on the results of a nationwide survey.

2. Performance Measurement

2.1 Relevance of performance measurement

Privatising principles, management control, power delegation, decentralisation and definition of responsibilities lead to a new way of thinking performance measurement (Streib and Poister 1999a). The development of new management tools, in private sector, allowed for an important improvement in the advancement of these measures in non-profit organisations. However, in

¹ *Output* are defined as the goods or services produced by government agencies (e.g., teaching hours delivered, welfare benefits assessed and paid, detected crime rate); *outcome* are defined as the impacts on social, economic, or other indicators arising from the delivery of outputs (e.g., public safety, student learning, social equity).

public sector, the definition of performance measures represents a major difficulty as the information concerning inputs is almost the only basis to performance measurement (Jones and Pendlebury 1992). The output measurement becomes extremely complex, as there is rarely a market price defined for the goods and services delivered to the community. This would require one to know, for example, the cost of preventing a crime, educating a student or treat a patient. The solution involves comparing monetary information of inputs with nonmonetary information of outputs. This originated the development of performance key indicators that incorporate quantitative and qualitative monetary and nonmonetary information (Kaplan and Norton 1992 and 1996a).

Guthrie and English (1997) refer to the need of distinguishing between performance evaluation in public and in private sectors, in the sense that, for the first, the distribution of goods and services does not follow the market model. Also, profit is not a relevant performance measure, that is, the financial demonstrations of the profit analysis of a governmental entity does not reveal if it has reached the defined objectives (Carter, Klein and Day 1993; Guthrie and English 1997). If doubts remain about the importance of nonfinancial measures in public sector, they are even more prevalent in this sector given that their objectives are defined mainly in nonfinancial terms, according to the nature and complexity of its activities (Jackson 1993; Guthrie and English 1997; Kloot and Martin 2000).

The relation between supply and demand of information concerning performance evaluation is used, by several authors, in assessing the different roles of performance measures and their usefulness (Mayston 1985; Behn 2003; Dooren 2005). To assume a really significant role, that information should be useful to its users; therefore, the production of performance information must follow a set of steps to assure relevance (Dooren 2005): the definition of what is intended to be measured, as well as the adequate indicators; the collection of internal and external data; the analysis of the data and its transformation from data to knowledge takes place; and the report of the information that will support decision making. This information is extremely useful in several activities, such as planning and budgeting, in performance auditing, in the definition and clarification of organisational objectives, in outcomes evaluation, disclosure of information to citizens, indication of effectiveness of the different services and activities, in the increase of quality of inputs and outputs, in the determination of units of the service with increased cost effectiveness, in the control of workers behaviour, in the motivation of all to increase performance, in promoting what is being done well, in the celebration and recognition

of success, in learning through the evaluation results and in the better quality of the service delivered through a continuous feedback process (Dooren 2005; Mayston 1985; Behn 2003).

2.2 International initiatives

A major lack of information for performance measurement led to the development of several initiatives at the international level. The *Financial Management Initiative* (FMI), introduced in 1982 by the British Government envisaged the creation, in each department, of a system where managers at all levels, should have a clear vision of objectives to reach and have the possibility of measuring outputs and the performance concerning these objectives. Secondly, they should be able to define responsibilities in way that allows for a better management of resources. At last, they should have the necessary information, training and qualification to exercise of their responsibilities in an effective way (Jones and Pendlebury 1992: 24).

The concern with performance measurement and evaluation originated profound reforms. It is important to remark that the unsuccessful application of some measures was due to the fact that the majority of existing managers in the departments being politicians, and not possessing the necessary qualifications to undertake the planned objectives. This led to the *Next Step Agencies*, of British initiative, that stated that management should be assured by the executive personnel of the management area and not by politicians.

In the USA, the *Governmental Accounting Standards Board* (GASB) also played a relevant role by encouraging governmental entities to develop, use, and disclosure measures of performance concerning every activity (Julnes and Holzer 2001). However, two years after the introduction of this initiative, the development of a performance evaluation system was still well below what was expected.

The Australian Government has also suffered deep changes during the last years, largely due to the importance given to performance measurement and evaluation and to the results-oriented management (Guthrie and English 1997). The introduction of the *Financial Management Improvement Programme*, based on concepts of efficiency, effectiveness, and performance, constituted the start point to change. This programme followed three fundamental objectives (Guthrie and English 1997: 154): “streamlining the budget formulation and simplifying and updating the rules regulating public financial management; improv[ing] the system by which departments and agencies make decisions, manag[ing] and evaluat[ing] achievements and enhancing public accountability and scrutiny”.

In conclusion, if performance measures are efficiently used, then they can become a relevant instrument for decision making. “Performance indicators in political competition may be as important as prices in market competition” (Johnsen 2005: 9), when these measures reflect all the stakeholders and organisational objectives.

3. Multidimensional Models of Performance Measurement

The literature calls for a multidimensional approach of performance measurement (Ballantine, Brignall and Modell 1998; Brignall and Modell 2000; Kloot and Martin 2000; Modell 2001; Johnsen 2005). Brignall and Modell (2000) analysed the implications of the introduction of performance measures for organisational theory. Many scholars argue that the comprehension of performance measures in the public sector should be adapted to the cultural and political environment. If public activity is surrounded by numerous stakeholders (such as professionals, politics, citizens and taxpayers), the development of multidimensional models of performance measurement is relevant for performance improvement, taking into account its specifications (Kloot and Martin 1997; Brignall and Modell 2000; Johnsen 2005).

The development of an appropriate performance measurement system is based on a model that considers internal and external stakeholders (Johnsen 2005), as well as the context of ambiguity that affects decisionmaking (Carter, Klein and Day 1993). The multiplicity of objectives that characterises the public sector makes the process of performance measurement more difficult (Ittner and Larcker 1998), so the measures developed should consider all the interests and interactions. In the development of this model, is important take into account the pressure and the power of different economic agents, especially government professionals and the users of public service. The latter agent (users) has a significant importance after the NPM reforms, considered the most important perspective in the public sector performance measurement.

Multidimensional models introduced in the 90s decade appear as a way to surpass limitations of the traditional financial measures. The Balanced Scorecard (BSC), the Performance Pyramid and the Results and Determinants Framework are examples of multidimensional models found in the literature (Ballantine, Brignall and Modell 1998; Brignall and Modell 2000). Following the development of these models, many researchers focus on the best way to implement them

as a strategic management tool (Kaplan and Norton 1992, 1996a, 1996b and 1997; Klott and Martin 1997; Ballantine, Brignall, and Modell 1998).

Table 1 presents a comparative analysis of three performance models focusing on the performance perspectives used, as well as the characterisation of each perspective according to two categories: measures of results and success determinants. Each model focuses on different perspectives and should be adapted to the organisational mission (Ballantine, Brignall e Modell 1998).

Table 1: Multidimensional Performance Measurement Models

Models	Perspectives	Results / Determinants	Authors
Balanced Scorecard	Finance Costumers Internal Process Growth and Learning	Results Results Determinants Determinants	Kaplan e Norton (1992)
Results and Determinants Framework	Financial Performance Competitiveness Quality of service Flexibility Resource utilization Innovation	Results Results Determinants Determinants Determinants Determinants	Fitzgerald <i>et al.</i> (1991)
Performance Pyramid	Finance Customers satisfaction Flexibility	Results Results Determinants	Lynch e Cross (1991)

Source: Based on Ballantine, Brignall and Modell (1998).

The BSC is a performance measurement model with a significant application in the public sector in recent years. It is a business tool that can be useful for public organisations if it is properly adapted and implemented (Niven 2003). Kaplan (2001) was studied the application of this model in three not-for-profit organisations: *United Way of Southeastern New England*, *Duke Children's Hospital* and *New Profit Inc*. He found that the BSC was successfully implemented, as the performance and accountability of these organisations greatly improved.

Chan (2004) and Ho and Chan (2002), based on a sample of 132 American municipalities and 52 Canadian municipalities, found that only about 40% of the chief administrators have some perception and knowledge about the BSC features and objectives; only 7,5% of the municipalities (11 American and three Canadian) implemented the BSC. They also found a positive relationship between the size of municipalities and the perception of BSC among chief administrators; so, it is understandable that American municipalities, which are larger municipalities, have a greater level of its implementation.

After defining the most appropriate model, it is important to proceed to its implementation. The implementation process should integrate the employees and managers of all organisational levels (Kaplan and Norton 1992).

4. Use of Performance Measurement in the Public Sector: Some Empirical Studies

Performance measures have different uses, according to the defined objectives (Behn 2003). They can be used at the operational level, as a control tool; at the strategic level, as a management tool; and in the analysis of the individual performance (Carter, Klein and Day 1993). On the other hand, they can be different for the agents/actors in this measurement process, like public managers (of different levels), politicians (national and local level), professionals, citizens, and civil servants, given that each one of these agents use measures differently, accordingly its personnel interests.

Many scholars find that managers use performance measures more than politicians (Streib and Poister 1999a; 1999b), and they are more commonly used in an environment of uncertainty and ambiguity (Carter, Klein and Day 1993; Helden and Johnsen 2002). They are still more frequent in local government than in central government (Streib and Poister 1999a; 1999b; Kloot and Martin 2000).

Streib and Poister (1999a 1999b) were studied the validity, legitimacy, and functionality of performance measurement in municipal governments based on the results of a survey sent to 1218 municipalities of Georgia state, which have more that 25.000 inhabitants. Scholars concluded that output measures are used more frequently in many functional areas, where the improvement of the process decisionmaking, the accountability and the electorate pressures represent important incentives in the use of performance measures (90%, 40% e 25%, respectively). In regard to the management processes, where performance measures are used, they found that strategic management, strategic planning, and the change process were those with a greater level of usage of these measures. They also concluded that over 70% of municipalities consider that performance measurement improves the quality of delivery service, in a significant or moderate level.

Julnes and Holzer (2001) studied the factors that determine the use of performance measurement in public organisations, based on the results of a national survey of state and local government officials. Scholars were analysing the use of performance measurement based on

the level of its adoption and implementation. They find that the process of adoption is predominantly affected by technical and rational factors (such as resources, information access; goal orientation and external requirements), while the implementation process is predominantly determined by political and cultural factors (such internal and external interest groups, risk taking and attitude). Like Streib and Poister (1999a), Julnes e Holzer (2001) found that output measures are used with more frequency in strategic planning, resource allocation, programme management and monitoring, and in reporting to internal management, community, elected officials and media than are efficiency and outcome measures.

Dooren (2005) studied the demand and supply of performance information, focusing on its causes and conditions. He used a questionnaire that asks about measurement practices, data and targets available and the use of performance information. This scholar found a positive correlation between the adoption and the implementation of performance measurement systems, based on a range of factors: characteristics of the outputs and outcomes measures, political interest, size of the organisation, level discretion of operators, available resources, and goal orientation. The main conclusions of this study appoint for a high level of adoption and implementation of performance measures in organizations that have more observable outputs, with low ambiguity and high routine, and normally in large organizations. Less discretion and the goal orientation correlate positively with implementation; the adoption is not affected by these factors. The lack of resources does not explain the adoption and implementation of performance systems, because it constitutes an important barrier for performance measurement (both for adoption and implementation). About the political interest it is not a determinant factor in the explanation of the degree of adoption and implementation (Dooren 2005: 373).

In the Table 2, we present a comparative analysis of the relevant research in public sector performance measurement. For each study, we identify the source, the organisation, the research method and the research question(s) used. In regard to the research question, many studies focus on the analysis of the factors that affect the utilization of performance measurement; the analysis of the impact of performance measurement on the efficiency and effectiveness is still irrelevant.

Table 2: Research in Performance Measurement in the Public Sector

Source	Organization/ Country	Research method	Research question
Dooren (2005)	Ministry ² / Belgium	Survey	Which factors determine the adoption and the implementation of performance measurement?

² Ministry of the Flemish Community, Belgium.

Edwards and Thomas (2005)	Municipal governments/US A	Case study	How can the experience of <i>Atlanta Dashboard</i> in performance measurement contribute to developing a municipal performance measurement system?
Bogt (2003)	Local government/Germany	Survey	Which criteria and performance measurement styles are used by local politicians in the performance measurement of top professional managers?
Julnes and Holzer (2001)	Local and state government/USA	Survey	Which factors affect the adoption and implementation of performance measures?
Modell (2001)	Health care / Norwegian	Semi-structured interviews and archival data	How do the properties of institutional processes of health care sector impinge on the extent of pro-active choice exercised by senior management in the development of multidimensional performance measurement?
Brignall and Modell (2000)	Public sector	Literature review	What are the implications of institutional theory in the successful implementation of multidimensional performance measurement and management?
Kloot and Martin (2000)	Local government/Australia	Interview	How has performance measurement been applied to local government and how are performance measurement systems integrated with strategic objectives?
Johnsen (1999)	Local government/Norway	Case study	How may decoupled or loosely coupled implementation approaches serve instrumental purposes rather than merely symbolic purposes?
Streib and Poister (1999a)	Local government/USA	Survey	To what extent has performance measurement become integrated into contemporary local government management?
Collier (1998)	Police/UK	Case study	What is the utility of performance measurement in the police service management?
Peurseem Van, Michael Prat and Stewart Lawrence (1995)	Health care	Literature review	To what extent should performance indicators be applied to the assessment of management?

5. Constraints of Performance Measurement

“Performance evaluation of government activities is essential in any democracy” (Jackson 1993: 9). The importance of making government accountable to the electorate and other stakeholders takes to the definition and development of outcomes measures of the policy delivery. The goal is to measure whether adopted policies are efficient and effective in order to promote the value for money and the value for citizens.

Carter, Klein, and Day (1993) assert that the use of benchmarks or standard measures to evaluate good or bad performance may constitute a problem in performance measurement. This is due to the problem of:

- the choice in performance targets;
- temporal comparisons;

- comparability within organisational units;
- external comparability.

The ambiguity and confusion of performance measures, the integration of data and its introduction in the performance measurement system represent important constraints of performance measurement (Streib and Poister 1999a). Johnsen (2005) found that some relevant questions in public sector performance measurement are still unanswered, essentially the lack of a conceptual framework and a model of performance measurement. On the other hand, the search for better indicators is not easy and the use of performance measurement systems in open societies and competitive democracies does not produce the desired outcomes (Johnsen 2005). This author appoints out four important sets of questions on public sector performance measurement, according to four different public management cultures: hierarchist, egalitarian, individualist, and fatalist (see Table 3).

Table 3: Constraints of performance measurement in Public Sector

Public Management Culture	Questions on Performance Measurement
Hierarchist	How politicians and the legislature can control the administration and the civil servants? This is the traditional top-down control system.
Egalitarian	How can performance measurement make government transparent? How can performance measurement empower citizen, users and interest groups? How can PIs function as checks and balances in order to counter formal political power?
Individualist	How can performance measurement systems be made accessible and user friendly? How can actors, such as managers, politicians and lobbyists use PIs for their own purposes? This perspective is favorable to decentralization and individual approaches.
Fatalist	How could public policies go wrong and end up crises, scandals and catastrophes? How can performance measurement be used to prevent crises, scandals and catastrophes? Fatalists argue that all systems and policies motivate crises, scandals and catastrophes.

Source: Based on Johnsen (2005: 13-14).

In a nutshell, the measurement of outputs and outcomes and its relationship with objectives, the existence of multiple stakeholders, the resistance to change, the lack of political motivation, the typical bureaucratic culture, and resource limitations are appointed as the most relevant constraints of public sector performance measurement.

6. Performance Measurement in Law Enforcement

6.1 Usefulness of performance measurement in law enforcement

Law enforcement is a complex area of public service, based on the diversity and heterogeneity of its activities and objectives. Given that, police performance measurement is also complex

and ambiguous and the existing research is still insufficient to improve the knowledge about the measurement of organisational performance in police work (Carmona and Grönlund 2003). Additionally, the existence of different cultures and stakeholders and the conflict between managers and police officers also implies a difficult measurement the performance of police work (Collier 1998).³ As with the private sector and other public organisations, the importance given to performance measurement in police services has grown in the context of NPM initiatives. Some reforms were introduced in the policy agenda, in the last years, in order to increase investment in the deployment of performance metrics for police activity.

Besides the complexity, heterogeneity, and diversity, there are still many social and economic factors that influence police service performance, such unemployment, immigration policy and society behaviour relatively to crime (Carter, Klein and Day 1993; Collier 1998, 2001 and 2005; Drake and Simper 2005). This implies the use of financial and non-financial performance indicators (e.g. crime rate, call number, time response, complaints against police agents, societal awareness about police service and citizen satisfaction). According to Vollaard (2003), the definition of performance indicators and the introduction of performance measurement systems are an important incentive to improve multidimensional performance.

Police forces carry out diverse functions, like crime prevention, community policing, law enforcement and maintaining public order, drug, and road traffic. Consequently, there are a variety of objectives, which many times are not consensual. So, performance measurement should succeed a clear definition of responsibilities and central activities (Rogerson 1995) and the introduction of performance culture in public administration, namely in police services (Collier 2001).⁴ In this context, police activity has witnessed a change of paradigm in the last decades. The new policing paradigm is a complement of the traditional paradigm based on the reduction of crime; it emphasises community policing—a new perspective of citizens where police work has an important role in raising the quality of urban life (Carmona and Grönlund 2003:1481).

In the beginning of the 90s, the British government introduced a new performance measurement system due to the increase of crime rate. The globalization of the criminality and the increase of terrorism attacks drive a great review and reform of the competencies and integrity of police work (Collier 1998 and 2005). Consequently, this process of change was

³ The effects of theory agency have a greatest importance for the public sector given the high number of stakeholders with interest in the organisational performance.

⁴ In 1993, only 27% of resources of the British police forces were related to central activity of crime prevention and reduction.

developed in two steps: first, the development of a financial information system with the aim to enable costings to be matched with activities and outputs; costs should be allocated in eight functional categories of activities: operational activities (patrol, crime, traffic, public order, community relations and others) and non-operational activities (training and management). Second, the development of a system of performance measures with 435 indicators allocated to various functional categories: organizational structure, crime detection, crime prevention, crime proceedings, traffic, recruitment and wastage, complaints, public order, drugs and civilianisation. However, many changes were occurred in the requirements and in the number of used performance indicators, essentially following the introduction of Best Value Performance Indicators, in 1999, and the Statutory Performance Indicators, in 2004 (Collier 2005).

Currently, performance indicators are defined in the Policing Performance Assessment Framework, based on six important objectives for the police: citizen focus; reducing crime; investigation crime; promotion of public safety; providing assistance, and resource usage. These six objectives are grouped into four categories: input, process, outputs and outcomes that rely on 14 performance indicators (see Table 4).

Table 4: Relationship between objectives, performance measures and indicators

Objectives	Performance measures	Performance indicators
Citizen focus	Inputs	Number of 999 calls to the police
Reducing crime		Number of crimes
Investigation crime	Process	Number of public order incidents
Promotion of public safety		Number of road traffic collisions
Providing assistance		Time spent by officers in public
Resource usage		Response times
	Outputs	Incidents of stop/search
		Adequacy and timeliness of case files for prosecution
		Complaints against police
	Outcomes	Sickness absence
		Medical retirements
		Number of arrests
		Number of detections
		Public satisfaction (based on survey results)

Source: Based on Collier (1998 and 2005).

Measures of outputs and outcomes relatively to the police activity are not easy to obtain given the traditional emphasis on the input and process measures. However, Collier (2005) found an increase in the use of outputs and outcomes measures, as opposed to the decrease of the inputs and process measures. On the other hand, the central objective was shifted from the arrests and detection to the prevention and reduction of crime. He also found a significant decrease (about

40%) in the number of performance indicators used (relational to input and process indicators), as did Helden and Johnsen (2002) in regard to performance measurement in the Germany and Norway local government.

Many scholars defend that the crime rate is a traditional measure that narrow the effective performance and do not inform about the real level of crime because many situations are not known and detected (Carter, Klein and Day 1993; Collier 1998; Carmona and Gronlund 2003). Consequently, a decrease in the crime rate may not mean good performance, but a change in the behaviour of community relatively to crime (increase in the number of accusations and the number of people with telephone). “Performance measures of the police are, in fact, performance measures of the community as a whole (Carter, Klein and Day 1993: 57); so, performance measurement of police work should consider a multidimensional analysis.

6.2 Performance measurement in the Portuguese law enforcement

Portuguese law enforcement has also witnessed organisational change similar to other countries. The centralised structure, the emphasis on the rule of law, and the traditional bureaucracy hinders the process of change (Carvalho et al. 2006). In this way, the intention of providing better services, increasing civil servants’ skills, improving resource management (Araújo 2001), and adopting other initiatives of the NPM has not been successful, making Portugal a ‘later adopter’ of NPM (Carvalho et al. 2006 : 167).

The process of change implies a reorganisation of some police agencies of the National Guard (GNR), Public Safety Police (PSP) and the Judicial Police (PJ)⁵, with the main goal of increasing efficiency and effectiveness. Each one of these police forces has a national structure and responds hierarchically to the Ministry of the Interior, in the case of the first two forces, and the Ministry of Justice, in that latter case. Therefore, they only have administrative autonomy; the financial management is highly centralized. Portuguese government recently adopted a reform of the police system, based on the need to create a unitary model for the Portuguese police system, one that encompasses the GNR, the PSP and the PJ—identical to the Spanish police model. The Portuguese police agenda reform recently led to the creation of the Municipal Police (PM)⁶—a local police that operates at a more proximate level to the citizens. These police forces are organised by each municipality’s executive council and should

⁵ Decree-Law n° 231/1993, 26 de June; Law n° 5/1999, 27 January and Decree-Law n.° 275-A/2000, 9 November, respectively.

⁶ Law 140/1999, 20 May and law n° 19/2004, 28 August.

cooperate with the other police forces.⁷ Financially, their budgets are part of the municipal budget; so, although more autonomous than central police forces, they do not have local financial management.

Based on the results of a nationwide survey carried out by Gomes (2007) in the Portuguese police system, NPM initiatives were found to have a high influence on the organisational change of police services. The 'quality of delivery service', the 'orientation towards citizens' and 'better management costs' are considered the most important issues introduced by NPM.

Police chiefs consider the use of performance measures and the improvement of the control system important for good performance measurement. However, the existing regulation only foresees the performance measurement of employees (chiefs, agents, and administrative employees) and operational activity (essentially, statistical information on the crime rate). Citizen satisfaction is not measured.⁸ In regard to financial performance, this information is highly centralised, given the hierarchical structure of Portuguese police.

Table 5 shows the results of the use of performance measures in the Portuguese police, based on five perspectives of the BSC (Chan 2004): citizen satisfaction, financial performance, operational efficiency, innovation and change, and employee performance. The results support what was said about the legal rules existent in Portuguese police. Employee performance and operational efficiency measures are more used by a great number of police agencies; financial measures are less used because this information is centralized at the management level. The use of these measures is medium or high. About 27% and 42% of agency chiefs responded that the use of employee performance and operational efficiency, respectively, is high; 48% and 39% agencies consider a medium usage of them, respectively. Innovation and change measures are also used to some degree (48% and 30% agency chiefs responded that they use them at a medium or high level, respectively).

With regard to citizen satisfaction measurement, 52% and 31% of police chiefs reported that their agencies use these measures at a medium or high level, respectively. However, we should be cautious in reading these results, because according to informal conversations with some

⁷ Only 31 local governments have Municipal Police. This process is in the initial phase.

⁸ Government requirements about performance measurement in the police forces are defined for the GNR (Portaria n° 279/2000, 2nd series); for the PSP (Portaria n° 939/2003, 2nd series) and for the PJ (Decree-Law n°. 275-A/2000). For the Municipal Police agents are applied the general requirements of civil servants.

police chiefs, agencies only use information about complaints and suggestions by the community; it is not common practice to use surveys to gauge community satisfaction.⁹

Table 5: Usage of performance measures

		Citizen satisfaction	%	Financial performance	%	Operational efficiency	%	Innovation and change	%	Employee performance	%
		N		N		N		N		N	
Total		249		249		249		249		249	
No		122		161		69		95		63	
Yes		127	100	88	100	180	100	154	100	186	100
Level of usage	Low	17	13	17	19	18	10	29	19	37	20
	Medium	66	52	48	55	71	39	74	48	89	48
	High	39	31	19	22	76	42	46	30	50	27
	Very high	5	4	4	5	15	8	5	3	10	5

Regarding the characterisation of the existing performance measurement system in the Portuguese police force, police chiefs consider that traditional financial and non-financial measures are sufficient; so they are comfortable with the existing system. On the importance of performance measures in organisational improvement and its articulation with the organisational strategy, the results are not conclusive, given that the majority of the respondents adopt a neutral level of concurrence.

Another question on the national survey asks about key performance indicators of police activity, for each one of the five perspectives mentioned above. This information is important in developing a strategic map to improve performance measurement in the Portuguese police. Results show that the ‘quality of service delivery’, level of productivity’, ‘time response’, ‘adoption of new technologies’, ‘reduction crime rate’, ‘level of citizens and employees satisfaction’, ‘image and prestige’, are among the indicators considered most important for the police (see Table 6).¹⁰

⁹ The ‘citizen satisfaction’ measurement is one of the most important perspectives of the BSC for the public sector, given the social mission of public organizations (Kaplan 2001; Niven 2003; Chan 2004).

¹⁰ Note that for each performance perspective, we chose only the three performance indicators most referred to by police chiefs.

Table 6: Key performance indicators for each performance perspective

Citizen satisfaction	Financial performance	Operational efficiency	Innovation and change	Employee performance
1. Quality of delivery service	1. Budgeting	1. Quality of delivery service	1. Investment in training and skills	1. Quality of delivery service
2. Image and prestige of police service	2. Level of budgeting execution	2. Reduction crime rate	2. Level of adoption of new technologies	2. Level of productivity
3. Level of citizen satisfaction	3. N° of policies for km and inhabitant	3. Level of productivity	3. Response time in the process resolution	2. Employee satisfaction

In Table 7, we propose a strategic map for the Portuguese police forces, based on the key performance indicators referred to above, in much the same manner as Chan (2004) and Wisniewski and Dickson (2001: 1063). For each performance perspective, we define a strategic objective and the appropriate actions required to execute them. All key performance indicators are articulated with this objective, so as to ensure that we are measuring what we really want to measure. This strategic map should be adapted in consequence of changes in the strategic objectives; so, it is a dynamic and flexible map.

Table 7: Proposal of a strategic map for the Portuguese police forces

Citizen satisfaction	Financial performance
Objective: Increase citizen satisfaction	Objective: Reduce costs
Action 1: Reduce crime and vandalism Action 2: Increase citizen participation Action 3: Improve the response time	Action 1: Increase financial and management control Action 2: Implement appropriate cost system
Indicator 1: Quality of delivery service Indicator 2: Image and prestige Indicator 3: Level of citizen satisfaction	Indicator 1: Budgeting Indicator 2: Level of budgeting execution Indicator 3: N° of policies by km and inhabitant
Operational efficiency	Innovation and change
Objective: Reduce crime rate	Objective: Increase the capacity to solve problems
Action 1: Prevent and identify crime Action 2: Increase policing community Action 3: Define central activities	Action 1: Improve information systems Action 2: Adoption of new technologies Action 3: Improve internal processes
Indicator 1: Quality of delivery service Indicator 2: Reduction crime rate Indicator 3: Productivity	Indicator 1: Investment in training and skills Indicator 2: Level of adoption of new technologies Indicator 3: Response time in the process resolution
Employee performance	
Objective: Increase productivity	
Action 1: Increase the level of qualification Action 2: Increase the level of motivation Action 3: Motivate the initiative capacity	
Indicator 1: Quality of service delivery Indicator 2: Level of productivity Indicator 3: Level of employee satisfaction	

6.3 The implementation of a multidimensional model – the Balanced Scorecard

The BSC, defined in the literature as a strategic management system (Kaplan and Norton 1992 and 1996), has increased exponentially in the public sector, and specifically in law enforcement, as a way to solve problems of management and measurement performance. For example, the Swedish National Police Board (Carmona and Grönlund 2003) implemented this management tool in 1998. The goal was to improve vertical and horizontal communication of the strategy and to complement the existing formal collection of criminal statistics with a management planning and control system. The performance dimensions introduced in the BSC are: resources, citizens, success, and people. Measurement of citizen satisfaction is done through the use of questionnaires that incorporate public opinion on the police work. Scottish police, namely the *Dumfries and Galloway* Constabulary, have been implementing the traditional perspectives of the BSC in a gradual and progressive way since 1997 (Wisniewski and Dickson 2001).

In Portugal, despite a very low level of application of the BSC, Gomes (2007) found a high willingness on the part of police chiefs to implement the BSC. The willingness to apply the BSC is greater in larger and more autonomous agencies, as well in agencies where police chiefs are more knowledgeable about its methodology, language, and functioning of the BSC and more aware of the importance of NPM initiatives.. This also happens in agencies where is done The Municipal Police of Matosinhos is an example of one police agency where the BSC is currently being implemented. Performance perspectives used are based on the original model proposed by Kaplan and Norton (1992): citizens, internal processes, learning and innovation, and financial performance.

In regard to difficulties in the implementation of the BSC in the Portuguese police forces, the excessive bureaucracy, the centralised structure and political context in which these agencies operate, the resistance to change in public administration, the focus on short-term problems, a lack of financial autonomy, and the inexistent association between employee rewards and performance are considered important barriers in this process.

The importance of the BSC in the organisational performance is recognised by police agents. However, given the Portuguese police system's centralised structure, the implementation of this strategic tool by each police agency is quite hard. This process change should begin with

an adequate change in the law, one that increase the delegation budgeting and financial management.

Conclusion

Public sector organisations witnessed important changes after the NPM where efficiency and effectiveness are concerned. The existence of a multidimensional measurement performance model is crucial to the decisionmaking process, to the increase of transparency and accountability, and to the improvement of management resources. Important constraints on the public sector performance measurement include the lack of political and management interest in performance measurement, the 'old' bureaucracy, the political culture, the time and financial resources needed to implement this system, the lack of skills, and the lack of association between employee rewards and performance.

The literature reveals the importance given to the multidimensional models and its significant increase in public and not-for-profit organisations after the introduction of NPM reforms. The social mission followed by this kind of organisation, the ambiguity of objectives, and the diversity of stakeholders call for the adoption of multiple perspectives of performance, like citizen satisfaction, operational efficiency, employee performance, learning and innovation capacity and financial performance. The focus on community satisfaction represents the most relevant performance perspective for public organisations. The introduction of performance measurement systems in the public sector require a multidimensional analysis of performance, one rigorous adaptation to the political context in which these organisations operate, a change in the resistance culture face to performance measurement and the consideration of citizens and its social needs as the main goal to obtain.

Law enforcement also has its limitations with regard to the management and measurement of performance. External factors that affect police work, like behaviour of community and unemployment, the complexity of activities and the ambiguity of objectives, and the political context continuously alters initiatives and political objectives; so, the comparability of performance information is not easy. In Portuguese law enforcement, multidimensional performance measurement is still in an initial phase. Measures of operational efficiency and employee performance have higher level of usage. This is justified by the legal requirements for performance measurement in Portuguese law enforcement. Any process of change is initiated by the central government, thus the introduction multidimensional performance

measurement system, like the BSC, must be by a legislative initiative. There is a greater preponderance of the use of performance measures in the municipal police, given that it is a local police and it has more autonomy in the development of this kind of information.

Despite these limitations, governments have shown an interest in recent years to performance measurement in law enforcement. The implementation of the BSC in police forces of some countries, like Sweden, Scotland, United Kingdom, and Portugal is an example of the introduction of the strategic orientation and the improvement of performance organisational in law enforcement. The flexibility and dynamics of this management tool make it useful in the actual environment, both for profit and not-for-profit sector.

References

- Araújo, J. (2001) 'Improving public service delivery: the crossroads between NPM and traditional bureaucracy', *Public Administration*, Vol. 79, N. 4, pp. 915-933.
- Ballantine, J., Brignall, S., Modell, S. (1998) 'Performance measurement and management in public health services: a comparison of UK and Swedish practice', *Management Accounting Research*, Vol. 9, N. 1, pp. 71-94.
- Behn, R. (2003) 'Why measure performance? Different Purposes require different measures', *Public Administration Review*, Vol. 63, N. 5, pp.588-606.
- Bogt, H. (2003) 'Performance evaluation styles in governmental organizations: How do professional managers facilitate politicians' work?', *Management Accounting Research*, Vol. 14, pp.311–332.
- Bogt, H. (2004) 'Politicians in Search of Performance Information? Survey Research on Dutch Aldermen's Use of Performance Information', *Financial Accountability & Management*, Vol. 20, N. 3, pp. 221-252.
- Brignall, S., Modell, S. (2000) 'An institutional perspective on performance measurement and management in the 'new public sector'', *Management Accounting Research*, Vol. 11, pp. 281–306.
- Carmona, S., Grönlund, A. (2003) 'Measures vs actions: the balanced scorecard in Swedish Law Enforcement', *International Journal of Operations & Production Management*, Vol. 23, N. 12, pp. 1475-1496.
- Carvalho, J., Fernandes, M., Lambert, V., Lapsley, I. (2006) 'Measuring fire service performance: a comparative study', *The International Journal of Public Sector Management*, Vol. 19, N. 2, pp. 165-179.
- Carter, N.; Klein, R; Day, P. (1993) *How Organisations measure success: The use of performance indicators in government*, London, Routledge.
- Chan, L. (2004) 'Performance measurement and adoption of the balanced scorecard: a survey of municipal governments in the USA and Canada', *The International Journal of Public Sector Management*, Vol. 17, N. 2/3, pp. 201-221.
- Collier, P. (1998) 'Operations and Accountability: the role of performance indicators, financial devolution and strategy in the management of a police force', *International Journal of Police Science and Management*, Vol. 1, N. 1, pp. 81-93.
- Collier, P. (2001) 'Police performance management - an ethical dilemma', in Neyroud, P; Alan, B. (eds), *Policing, Ethics and Human Rights*, Devon, Willan Publishing.
- Collier, P. (2005) *In search of purpose and priorities: Police performance indicators in England and Wales, 1992-2004*, Working Paper, Aston University, pp.1-14.

- Dooren, W. (2005) 'What Makes Organisations Measure? Hypotheses on the Causes and Conditions for Performance Measurement', *Financial Accountability & Management*, Vol. 21, N. 3, pp. 363 – 383.
- Drake, L., Simper, R. (2005) 'The Measurement of Police Force Efficiency: An Assessment of U.K.', *Contemporary Economic Policy*, Vol. 23, N. 4, pp. 465 – 482.
- Edwards, D., Thomas, J. (2005) 'Developing a Municipal Performance-Measurement System: Reflections on the Atlanta Dashboard', *Public Administration Review*, Vol. 65, N. 3, pp. 369-376.
- Guthrie, J., English, L. (1997) 'Performance information and program evaluation in the Australian public sector', *International Journal of Public Sector Management*, Vol. 10, N. 3, pp. 154-164.
- Gomes, P. (2007) *O papel do Balanced Scorecard na avaliação do desempenho do Sistema Policial Português*, Master Dissertation in Accounting and Auditing, University of Minho, Braga, Portugal.
- Helden, J. V., Johnsen, A. (2002) 'A comparative analysis of the development of performance-based management systems in Dutch and Norwegian local government', *International Public Management Journal*, Vol. 5, N. 1, pp. 75-95.
- Hoque, Z., Arends, S., Alexander, R. (2004) 'Policing the police service: A case study of the rise of "new public management" within an Australian police service', *Accounting, Auditing & Accountability Journal*, Vol. 17, N. 1, pp. 59-84.
- Ho, K., Chan, L. (2002) 'Performance Measurement and the Implementation of the Balanced Scorecard in Municipal Governments', *Journal of Government Financial Management*, Vol. 51, N. 4, pp. 8-19.
- Ittner, C., Larcker, D. (1998) 'Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction', *Journal of Accounting Research*, Vol. 36, N. 3, pp. 1-35.
- Jackson, P. (1993) 'Public Service Performance Evaluation: A Strategic Perspective', *Public Money & Management*, Oct-Dec, pp. 9-14.
- Johnsen, Á. (2005) 'What does 25 years of Experience tell Us About the State of Performance Measurement in Public Policy and Management?' *Public Money & Management*, Vol. 25, N. 1, pp. 9-17.
- Jones, R.; Pendlebury, M. (1992) *Public Sector Accounting*, Pitman, 5th Edition.
- Julnes, P., Holzer, M. (2001) 'Promoting the utilization of performance measures in public organizations: an empirical study of factors affecting adoption and implementation', *Public Administration Review*, Vol. 61, N. 6, pp. 693-708.
- Kaplan, R., Norton, D. (1992) 'The Balanced Scorecard – Measures That Drive Performance', *Harvard Business Review*, Jan– Feb, pp. 71-79.
- Kaplan, R.; Norton, D. (1996a) *The Balanced Scorecard. Translating Strategy into Action*, Boston, Harvard Business School Press.
- Kaplan, R., Norton, D. (1996b) 'Using the Balanced Scorecard as a Strategic Management System', *Harvard Business Review*, Jan – Feb, pp. 75-85.
- Kaplan, R., Norton, D. (1997) 'Why does business need a balanced scorecard?', *Journal of Cost Management*, May-Jun, pp. 5-10.
- Kaplan, R. (2001) 'Strategic performance measurement and management in non-profit organizations', *Non-profit Management and Leadership*, Vol. 11, N. 3, pp. 353-370.
- Kloot, L., Martin, J. (2000) 'Strategic performance management: A balanced approach to performance management issues in local government', *Management Accounting Research*, Vol. 11, pp. 231–251.
- Mayston, D. (1985) 'Non-profit performance indicators in the public sector', *Financial Accountability & Management*, Vol. 1, N. 1, pp. 51-73.
- Modell, S. (2001) 'Performance measurement and institutional processes: a study of managerial responses to public sector reform', *Management Accounting Research*, Vol. 12, pp. 437–464.
- Niven, P. (2003) *Balanced Scorecard step-by-step for government and nonprofit agencies*. New Jersey, John Wiley & Sons.
- Peursem, V., Prat, M., Lawrence, S. (1995) 'Health management performance: a review of measures and indicators', *Accounting, Auditing & Accountability Journal*, Vol. 8, N. 5, pp. 34-70.

- Rogerson, P. (1995) 'Performance Measurement and Policing: Police service or Law Enforcement Agency?', *Public & Money Management*, Oct-Dec, pp. 25-30.
- Streib, G., Poister, T. (1999a) 'Performance Measurement in municipal government: Assessing the State of the Practice', *Public Administration Review*, Vol. 59, N. 4, pp. 325-355.
- Streib, G., Poister, T. (1999b) 'Assessing the validity, legitimacy and functionality of performance measurement systems in municipal governments', *American Review of Public Administration*, Vol. 29, N. 2, pp. 107-123.
- Vollaard, B. (2003) *Performance contracts for police forces*, CPB Netherlands Bureau for Economic Policy Analysis.
- Wilson, C., Hagarty, D., Gauthier, J. (2003) 'Results using the balanced scorecard in the public sector', *Journal of Corporate Real Estate*, Vol. 6, N. 1, pp. 53-63.
- Wisniewski, M., Dickson, A. (2001) 'Measuring performance in Dumfries and Galloway Constabulary with the Balanced Scorecard', *Journal of Operational Research Society*, Vol. 52, pp. 1057-1066.