

## 5 From cost accounting to strategic cost management

### The experience of Italian higher education

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Cost management in public services has been recurrently associated with a negative allure, shaped by spending reviews and personnel cuts, overlooking the link with a strategic vision. This study re-positions cost management at the strategic level. It investigates if and how cost data are a source of reflection for top management to set, inform and pursue their strategy. At the empirical level, the research is based on a longitudinal participant observation in 28 Italian public universities, where costs data are collected, analysed, benchmarked and discussed with both middle and top managers.

The chapter shows a picture that is far distant from the cost-cutting approach and where costs data are part of a more strategic vision, though always coupled with other data. The empirical case shows three type of costs strategizing configurations: organizational reshaping; service balance and performance management.

The organizational reshaping configuration poses as a central element the benchmarking of costs data with other institutions, which become a reference point for assessing organizational efficiency. In the service balance configuration, costs are used to assess if and how resources allocated to a specific service generate value for users. The performance management configuration is the most controversial area, where costs data are used as a background element for negotiation, but not directly inserted in the individual dashboard of managers. This chapter, through the empirical case, offers a reflection on how costs data can be partnered with outcomes and effectiveness measures, covering a strategic role inside organizations.

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From cost accounting to strategic cost management: the experience of Italian higher education cost management in public services has often been viewed with disenchantment. The perception of costs is associated with spending reviews and cuts in personnel, disregarding their strategic role. This chapter re-positions cost management at the strategic level. This repositioning is central to reevaluate costs in their true essence: the calculation of how we use resources. This strategic view has two main benefits. The first is related to the results of cost allocation, that offer insights on how we consume our resources for service delivery. The second is related to the process for calculating these costs. There are several decisions in the process that might change the results; these decisions are not purely technical: they are a constitutive process in which managers, if involved, reflect on the services and products but also the organization and their responsibility centres.

This chapter poses the attention on these issues, presenting the experience of the Good Practice project. Good Practice is an Italian benchmarking initiative in which state universities voluntarily provide their costs, within the same protocol, in order to have a reference for their

strategic management. The project started in 1999 under the initiative of the Italian Government, but from 2003 it has been brought forward and financed by universities directly. The project overall has involved more than 50 state universities during its 20-year life.

The chapter focuses in particular on three cases that are representative of how universities adopted a strategic approach to cost management. Three types of cost-strategizing configurations are identified: organizational reshaping, service balance and resource programming. The study offers a picture that is very distant from the often-employed cost-cutting approach. Cost data are instead part of a more strategic vision, although always coupled with other data.

The chapter is organised as follows. The next section illustrates the context and the method. Then, the distinctive features of the strategic approach to cost are presented. The empirical cases are illustrated in the third section, followed by a discussion of the managerial implications.

## Context and method

This chapter is based on a longitudinal action research project carried out in Italian state universities. The research approach addressed the need to implement a reference framework for measuring and comparing costs associated with university support services, such as procurement, ICT services, libraries or research support.

The lack of consolidated frameworks on this topic pushed us to rely on the action research method. Interest in action research filtered down from social sciences, followed by renewed momentum in the 1980s, and its application in higher education studies (Cohen and Manion, 1980). Right from the beginning, there has been growing recognition for the way action research contributes to our understanding of practices in the various fields, where it can provide useful theoretical insights. The central issue of this approach lies in its interplay between science and practice, as both simultaneously influence the theoretical conceptualisation and the practical rules of the phenomena being studied (Argyris et al., 1985).

This chapter refers specifically to a 20-year project entitled “Good Practice”. The project was initiated in 1998 on the initiative of the CNSVU, the Italian national committee for evaluating the country’s university system. This independent body – established by central government – also provided its financial backing. The launch of the Good Practice project coincided with a lively period of reforms in Italy, especially for universities. Between 1993 and 1998, central government introduced a series of measures to move from a centralised model in higher education to a devolved system, giving universities greater autonomy to allocate their financial

resources, define their curricula and decide on their research priorities. Against this backdrop, the CNVSU decided to tackle an area that had, at that time, been largely neglected in the reforms, that of support services. Administrative staff still worked according to the old public sector model, weighed down by cumbersome bureaucracy. Staff generally came from a background in law, had no management skills and there were no control systems in place.

After preliminary discussions with the directors of our selected universities, we embarked upon the first project. This first project cycle involved ten universities, our three-person research team and a CNVSU member acting as external observer. The aim of this project was to develop a performance measurement system (PMS) for support services, and to compare universities through this PMS. Cost data formed a central part of the PMS and was related to the cost of delivering support services. The results of the first Good Practice project and the positive backing of university managers prompted the CNVSU to finance two further projects and so achieve broader consensus and diffusion.

In 2002, the CNVSU ceased its financing of the project. The universities were, however, keen to press ahead with the project, and proposed to finance the research themselves, starting from 2003. The project is still running, starting its 13th edition in 2021. The number of universities involved has increased over time, and more than 40 universities are part of the group, which covers 60% of all state universities in Italy.

## Strategizing cost: activity and benchmark

This research places a theoretical model for measuring costs at its centre. The choice of an activity-based management system was determined by our need to compare costs for support services from different organisations, our decision to construct a hierarchical model and findings from previous research (Arnaboldi and Azzone, 2002). The basic unit is a given activity (Anderson et al., 2002; Jones and Dugdale, 2002; Al-Sayed and Dugdale, 2016). In a basic activity-based framework, products and services are the consumers of activities and these activities, in turn, consume resources, and this ultimately drives up costs (Brown et al., 1999). An overview of this mechanism is given in Figure 5.1.

Figure 5.1 Activity-based scheme

Three levels of boxes. The first level (on top) is named overhead (one box), and this is then divided into activities (three boxes) in the next level. These activities are then split into cost objects in level three.

This theoretical basis was used to build a tailored model for support services. The model was designed, revised and tested interactively, involving university managers and staff in the

process, and the decision was taken to avoid standard package solutions. Because the model had to be flexible, this implied building a two-level framework divided into macro-activities and basic activities. By macro-activities, we mean services delivered for specific uses (e.g. procurement), and these can be further divided in sub-activities – or basic activities – which form our basic unit of analysis.

Figure 5.2 shows the key features of the system designed. First of all, from the very early stages, the model was always in the form of a hierarchical structure. This framework is intended to become a useful tool for managers wishing to find information at various levels of aggregation. The frame can also be used to design processes that give officers and operational staff selected access to the system. The second main feature of this control system is its modularity. Its graphic representation includes, as an example, three macro-activities (A, B and C), but the design of the architecture is such that other areas can subsequently be added along similar lines. This system modularity also operates at the lower levels of the architecture, with efficiency performance indicators (total costs and cost per driver) being designed and then fine-tuned on the basis of the managers' needs. The participants found it particularly interesting that an indicator could be used for all activities that worked with the same output/driver.

The two-level activity scheme brought additional flexibility through the option of including indicators of effectiveness, when needed, at the macro-activity or basic activity levels.

Figure 5.2 The reference model

Three columns of boxes, The first one says resources. The arrows point to the second column of boxes. These describe macro-activities that are split into costs by using drivers. The arrows point to a third column presenting total cost per cost driver.

Efficiency is measured in terms of how wisely resources are used. For both basic and macro-activities, the choice of reference measurement was obvious: the cost of these activities. Resources consumed in universities were first divided into three macro-activities, and these potentially could be further split into their basic activities.

The first benefit of this measurement is that it can be used to compare universities with different organizational arrangements, ignoring their specific structure and extrapolating the costs from “virtual macro-activities” modelled from the set of their constituent basic activities. By focusing on the activity, it was also possible to relate the cost of an activity to its product or to a measurement indicating how it is consumed – its driver (for example, personnel and the units of technical, administrative and teaching staff). Applying this Activity-Based Management (ABM) approach (Arnaboldi and Azzone, 2002), different organizations can be compared by dividing the total cost (cost of personnel) by the identified driver (no. of units of staff).

Clearly, allocating costs by macro-activity implies that the costs involved must be defined beforehand. We had to define the items in the chart of accounts that were taken into consideration and the methods used to evaluate them. The items used in this allocation exercise were defined on the basis of three criteria: (1) their bearing on administration costs; (2) whether the costs could be controlled by the offices in charge of administrative activities; and (3) the cost to extrapolate them. This led to us selecting the following cost items: internal personnel and outsourced staff.

Similar considerations were made when defining the method for evaluating the costs. Using the effective cost meant that we had the true figure for the resources consumed, but the burden to measure them was greater. Conversely, using standard costs was easier, but did not give the true expenditure for the universities. We turned again to our three criteria, deciding to measure the effective cost of each cost item.

Following the hierarchical model presented in the previous section, the design was developed and the single activities relating to each macro-activity identified. This is an essential step, as it is then that the elementary units are defined. These are then used to extrapolate costs and are the basis for the macro-activities and, therefore, for their performance. The system must, therefore, be given the necessary number of activities to provide sufficiently detailed information for management purposes, but not too many, as overly fragmented data would create difficulties both in terms of allocating the costs and in monitoring and using the measurements. During this phase, we worked very closely with internal university staff. Although we started from an initial proposal about the activities to include, the input of university operators was crucial and we modified the general activity-based model on the basis of their internal knowledge.

We used a similar approach for all the activities, identifying the drivers needed to calculate unit costs. At this point, we must note that we did not set up a driver for some of the activities (such as managing course equivalence in the Students Office or preparing financial statements in Accounting), as the information retrieved would have had little meaning.

Table 5.1 relates to the macro-activities involving the Students Office and gives the basic activities (in column 1), and the indicators or drivers that explain their level of consumption (in column 2).

Further steps were required to establish the cost of the activities considered. These involve defining the method for allocating the macro-activity costs to the basic activities and evaluating the drivers.

Table 5.1 Example of support services in teaching: activities and drivers

Activities	Drivers
1. Orientation and tutorship	No. students enrolled on degree courses
2. Matriculation	No. matriculated students
3. Enrolment	No. students enrolled on degree courses
4. Self-certification	No. students enrolled on degree courses
5. Record books/student cards	No. students enrolled on degree courses
6. Curricula	No. students enrolled on degree courses
7. Degree session management	No. graduates
8. State exam management	No. enrolled for state exams
9. Career management	No. students enrolled on degree courses
10. Attestation and certification	No. certificates issued
11. Transfers	No of transfers
12. Course equivalence and foreign students	None
13. Student activities	None
14. Research doctorate	No. students enrolled on PhD courses
15. Graduate schools and advanced courses	No. students enrolled to graduate schools and advanced courses
16. Agreements for work placements and internships	No. of agreements
17. Student grants, scholarships, fee exemptions and tax refunds	Total no. grants and scholarships (units)

The overall costs of the macro-activities were divided among the basic activities on the basis of the quota of time spent by staff on each basic activity. Each of these quotas were then

multiplied by the cost associated to each single person (loaded with all the items linked to placement, location and general services). The sum of the various contributions gives the cost of a given activity. Table 5.2 contains an example of the form we utilised.

Table 5.2 Example of costs allocated by activity

First and last name	Total cost for that person	Quotas				
		Orientation and tutorship	Enrolment	...	Grants, scholarships, fee exemptions	TOTAL
Name_1	€20,000	50%	10%	-	40%	100%
Name_2	€40,000	20%	30%	-	50%	100%
		Costs				
		Orientation and tutorship	Enrolment	...	Grants, scholarships, fee exemptions	TOTAL
Name_1		€10,000	€2,000	-	€8,000	€20,000
Name_2		€8,000	€2,000	-	€20,000	€40,000
		<b>€18,000</b>	<b>€14,000</b>	-	<b>€28,000</b>	<b>€60,000</b>

## Results

Good Practice-based research is heterogeneous in its use of costs, which are, in general, coupled with other performance indicators. We were able to highlight three configurations relating to cost usage, in the form of organisational reshaping, service balance and resource programming. The following figure shows how the universities are positioned for the three situations. Some universities adopted more than one type of logic.

Figure 5.3 The three strategic cost configurations

Three circles that are partially overlapping so every circle has separate overlaps with one other circle. However, there is a joint area in the middle where all the circles intersect.

Below, we have described the three configurations, taking one university as reference for each case to explain our approach.

## Organizational reshaping

The *organizational reshaping* configuration has, as its central element, the benchmarking of a university's cost data against those of other institutions, and this is taken as a reference point for assessing internal organizational efficiency. The case study in this configuration is Top-Small University. The General Director of Top-Small wanted to use costs, and in particular the unitary costs of support services, to assess how efficient their offices were. He intended to revise their organizational structure on that basis. Top-Small was keen to use detailed costs instead of following the typical linear spending review approach, and so apply a "precision intervention". In the words of the General Director:

I didn't want to simply cut costs, and I probably won't cut costs, but my feeling is that some of our services are overstaffed and others are understaffed. There are historical reasons for this, but it is also down to gradual changes in the university's strategies.

(General Director, Top-Small University)

This comment makes an important point: costs and their benchmarking with data of other universities is the first step and these are then integrated with elements that emerge from strategic considerations about the future direction of the university.

At the technical level, using costs for organizational configurations was carried out in three phases: (1) calculation of a benchmark value for the macro-activity and assessment of the efficiency for each support service; (2) analysis of the efficiency of the various offices and the activities they deliver and (3) definition of the university's strategy and re-allocation of personnel.

Phase 1 started by selecting a sub-sample of universities within the overall network of Good Practice universities, as this helped us to identify a target value of reference. The choice was directed and validated by the General Director who wanted both a technical fit (size, type of university) and a strategic fit:



I know that some universities are very efficient, but this is because they decided to downsize some of their services. We can see this from the effectiveness data. For us, quality of support is central.

(General Director, Top-Small University)

From our discussion with the General Director, we identified a cluster of nine universities to use for benchmarking the cost data. Within this sample, the unitary costs of each support service were compared against those of the universities in the cluster, allowing us to identify a target efficiency value for each service. The target value for efficiency was based upon two possible situations: the best target value in terms of efficiency and the median value, selected to avoid particular circumstances when costs were low due to a lack of resources.

By placing the unitary cost of each support service against a benchmark unitary cost, it was possible to identify situations where there was a deficit or surplus in resources. The results of phase 1 were elaborated in a graph to provide visual representation of each service, indicating whether each was over or under resourced (Figure 5.4). Each bar in the picture represents a support service and the numbers show the FTE (Full-Time Equivalent) in surplus or deficit for each service. As mentioned, this was achieved by comparing the median unitary value with the most efficient value for each service. This phase led to the identification of overstaffed and understaffed services.

Figure 5.4 Services with relative surplus or deficit in resources

This is a staples diagram showing to what extent how twelve different services are understaffed (staples below the line) or overstaffed (staples above the line).

The second phase was less straightforward. Top-Small wanted to have a reference cost for each office, not just for each support service (obtained in phase 1).<sup>1</sup> Starting from the Good Practice scheme, in terms of each support service, we calculated the efficiency for every office involved and identified a reference value for each (see Figure 5.5). Unlike the previous graph, each bar in this case represents an internal office, and its height gives the surplus or deficit in resources for any given office. As in the previous case, the delta analysis was carried out considering the most efficient value and the median reference value of efficiency.

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<sup>1</sup> Note that there is no one-to-one relationship between support services and organizational offices. A given support service (e.g. procurement) may be managed by more than one office. This implies setting a target for both services and offices.

Figure 5.5 Offices with a relative surplus or deficit in resources

This is a staples diagram showing to what extent how 30 different offices are understaffed (staples below the line) or overstaffed (staples above the line).

In this phase, the main challenge was to reconcile the cost data with the strategic objective of obtaining valuable references against other universities to support internal reorganization. In other words, the key question turned out to be: how should services be organised and prioritised? The Director wanted to identify the best university in terms of unitary costs, but he also wanted to find a reference that he could use strategically when making his own organizational choices. This was not possible since there was no “one best” university for all the services. A university could be efficient in one service, but not in another.

The “solution” was to highlight two major strategic choices that could be used to complement the unitary cost analysis. These were the centralisation-decentralisation of services, to be managed by central support services or departments, as appropriate, and the distribution of activities across central offices. Acting at this level allowed us to identify several organizational models of reference and their performance in terms of cost.

The third phase was more qualitative, but still based on cost data. At this point, the process consisted of redistributing personnel among the offices. Initially, the administrative staff responsible for the analysis thought that we could come up with some kind of sweeping “mathematical formula” based on cost data and use that for reallocating personnel. When presented with the benchmark of cost data, they realised that personnel could not be reallocated on the basis of costs alone. The main driver was to be the university’s strategic direction, as highlighted during a meeting:

Do we want to centralise our support service and save internal resources or is it better to place the service closer to students and academics? What are the Chancellor’s strategic priorities? Our process to redistribute personnel should be coherent with the university’s strategic choices.

This position changed the initial expectations of the working team, who refrained from immediately redistributing personnel, preferring instead to discuss the intermediate results with the Chancellor and define two other personnel redistribution plans based on the possible strategic choices.

## Service Balance

The second strategic use of costs involved *service balance*. Here costs are used to assess if and how resources allocated to a specific support service generate value for users. Costs are reshaped around the provision of a service, and customer satisfaction is the main aggregation element of this activity.

At the technical level, this second example again makes use of unitary costs, but here activity aggregation relates to the users and the delivery of services. A good example of this configuration is Aspiring University. With the arrival of a new Chancellor and a General Director who came from the private sector in 2016, Aspiring wanted to change its model for delivering support services, putting users at the centre and seeing costs and efficiency as strategic levers to improve these services. Starting with an in-depth analysis, the first step was to construct efficiency and effectiveness maps for each service, relating to three different types of service users, i.e. students, academics and support staff. Universities are positioned on the matrix depending on their unitary cost (horizontal axes) and on the student satisfaction (vertical axes). The position of each university on the maps facilitates the relative comparison between the position of the university and that of the others in terms of efficiency and effectiveness. When looking at this matrix for student support services, results showed a position in the middle for Aspiring. The university's General Director commented this:

This was acceptable in the past, today we want to compete with the best universities in Italy and be attractive to foreign students. If we do not improve our services, it will be hard to get there.

(General Director, Aspiring University)

The first step brought up the need for an overall picture of all services. This was not easy to do given that the unitary cost metrics are different. At the end, we opted for a matrix solution, where the service costs were rescaled against benchmark costs. This choice had the two benefits of seeing all the services together and to maintain the benchmark with other universities. Figure 5.6 shows the matrix arrangement as follows:

- Vertical Axis: this gives the position of a given service with respect to efficiency. Each unitary cost is normalised with respect to the average of all universities (set to 1). When the unitary cost for the university is above average, the value is greater than 1 and the service is placed in the bottom section of the graph.
- Horizontal Axis: this gives the position of a given service with respect to the average customer satisfaction value for teaching staff, PhD students and fellows, technical/administrative staff and students. Here also, customer satisfaction points for

each service are normalised with respect to the average of all universities (set to 1). When overall customer satisfaction in the service is below average, the value is less than 1 and the service is placed to the left of the graph.

This gives us four quadrants:

- Top right: services where the unitary cost is below average and customer satisfaction is above average. These are what the University considers virtuous services.
- Top left: services where the unitary cost is below average and customer satisfaction is also less than average. These are services considered critical for customer satisfaction.
- Bottom right: services where the unitary cost is above average and customer satisfaction is also above average. These are services considered critical in terms of efficiency.
- Bottom left: services where the unitary cost is above average and customer satisfaction is below average. These are services considered critical for both efficiency and customer satisfaction.

Figure 5.6 gives a clear indication of the most critical areas, these being Computer Systems (IT) for the efficiency and Accounting for the perceived effectiveness. Human Resource Services are instead critical for both effectiveness and efficiency.

Figure 5.6 The integration between efficiency and effectiveness. Position of services

A diagram in two dimensions, customer satisfaction (vertical axe) and efficiency (horizontal axe) constituting four squares presenting how different services position. The majority of the dots are on the right side (high efficiency) but then equally split between high and low customer satisfaction.

The third phase involved further in-depth interviews to focus on the main problems in each area and on possible solutions. Our organizational analysis meant that we could record several important facts about the role of the IT department in the university's vertical and cross-departmental processes. One point noted was the university's non-uniform approach to innovation projects. Firstly, we found that IT was still very fragmented, with an imbalance between the university's central – and more digital – structures, and the more peripheral areas. The reason was that there was no coordinated practice for innovative action.

The consequence of not having a single port of call in terms of computer management meant that each area was likely to go its own sweet way, generating inefficiencies and slowing work. This also meant that computer assets were also decentralised in their management, and this translated into duplication of data and information, with a waste of resources and an increase in mistakes. The problem was highlighted by several users:

We have too many systems for managing student data. Sometimes, we have to trawl through different systems to get what we want because everything is so fragmented.

(Education Department)

We have to fill in four databases, but what if we could just input the data once and it got replicated automatically everywhere else? The process could be improved if it were computerised.

(Technical Area)

For the university to achieve its objectives of rationalisation, efficiency and effectiveness, IT should be fully integrated into all university processes. What seemed to slow down this process mostly was a difficulty in communication and interaction between the IT department and the other organizational units.

This aspect was brought up by several departments and offices (see section 4.1). The people here felt marginalised, far from innovation initiatives and outside the process.

IT thinks only about IT and how to apply it. It doesn't look at organizational aspects, about knowing the processes or the users' needs.

(Director)

The IT manager also said that they were only marginally involved in designing and planning solutions. This situation was compounded when, as happened in some areas, there was an independent workgroup – not the IT Department – that managed IT.

We are not brought in at the design or planning stages.

(IT Department)

This seems to be confirmed by Back Office staff at the Education Office, who also found it difficult to be involved in processes or interact with end users of IT solutions, even at the design stage.

End users only ask me to come up with the product and don't want to get involved in designing it.

(Back Office)

Overcoming these interaction and communication issues is an absolute must for setting in place ongoing and effective innovation.

Secondly, we found that IT had very little in place regarding user orientation, whether for external (students) or internal (other departments and offices) users. One example given made reference to the Strategic Annual Plan – which has the precise purpose of defining future

projects – but they did not talk to other offices when preparing it. It could also be so much more effective if end users were involved.

[Software] is designed in a rigid manner, it can't handle special cases, but that is where it would be most useful.

(Unit Manager)

IT systems, in their very nature, must be allowed to evolve continuously and adapt to new technologies and to the new and amended laws that impose new models. However, the IT department had no unit dedicated to innovation projects and any R&D work in this area was often neglected as people were engaged in other routine work or busy coping with regular emergencies. On top of this, managing innovation requires organizational and management skills alongside IT and technical skills, but the former were given little consideration in the IT department.

## Resource programming configuration

The *resource programming configuration* is the most controversial area, as cost data are used in negotiation, but are not inserted directly on the manager's individual dashboards – so they are not linked to their bonuses. The “measurements” partners used in strategizing are service standards and project outcome.

Our example here is Large, a big and ancient university. In 2014, its General Director decided to revise the university's budgeting process, linking it to a mid-year review process. This need emerged after a review of historical data highlighted that managers were engaged in building up pots of reserve resources, mainly for central support services, which had not been picked up earlier, as he noted:

When I first analysed the data and budgeting cycle, I saw that every manager tended to overestimate the resources needed in their unit. Every year end, they find ways to spend the money in hurry even when this is not totally necessary.

The Director also gave his analysis about a possible solution:

When I first tried to discuss this matter with the managers, they challenged my request to rationalise spending with their greater knowledge of the resources required. This convinced me that we needed to use benchmark costs and efficiency in our budgeting, together with output measurements.

The outcome of this was that the budgeting process became a budgeting-performance cycle, introducing monthly management reviews and a mid-year renegotiation. The revision was set within the wider framework of a revision to the performance cycle, which was presented and promoted inside and outside the university. The following figure shows one of the graphs used to present this approach.

Figure 5.7 The Performance Management Cycle in Large (adapted – the original picture was in Italian)

A circle in the center with four equally sized parts, representing the concepts of plan-do-check-act. Each one refers to a box outside, containing describing characteristics.

The performance-budget process was divided into three phases. The first phase, which begins every October, consisted of the more traditional budgeting process. Managers were asked to set out their plans in terms of resources needed and results to be achieved. For the routine support services, the expected results (i.e. output) had to be expressed as customer satisfaction, or as the standard level to be maintained. The resources (i.e. input) had, instead, to be expressed in terms of total costs and investments needed. Efficiency indicators (unitary costs for each service) were additionally used as a reference for negotiation purposes, as highlighted by this comment made by the head of Management Control:

We do not use efficiency indicators explicitly when we budget resources. While they do not act as thresholds, they do play a role in our budgeting negotiations and can force managers to justify their budget requests.

Data from the Good Practice project were the main reference for customer satisfaction and efficiency. Benchmarked values are considered very important for central support services as there is no comparison data relating to other units, as the Director pointed out:

Managers in central administration use the lack of comparative values as an excuse. So, I decided to use the benchmark value, but not too rigidly. When, for example, they asked for more resources to support academics in their EU research proposal, I challenged them by asking for clear results. Are they going to improve their funding? Are they going to improve customer satisfaction? They must tell me.

The second phase takes place in June the following year and is based on the analysis of the money spent and results achieved in the first part of the year.

The goals of this phase are to:

- Verify the progress of the planned activities (in continuity and discontinuity) and the deviations at that moment.
- Estimate the expected use of resources with reference to the end of the financial year.
- Estimate the resources that are not necessary for a manager's area of responsibility and evaluate the benefit of using these resources in future years for the same objectives or other requirements.

The impact on the university's budget is to identify the resources that can be used in the planning of the next financial year for the same objectives or for different requirements. These resources are used in the overall forecast for the financial year of reference (x+1) and are available as soon as they are included in the budget, as long as they are recorded in the statements for financial year x to ensure that the budget is covered.

During this phase, the General Director again held face-to-face meetings to revise the data. When considerably less money was spent than expected, the Director worked on agreeing an updated budget or a new proposal for using these funds during the next part of the year. As he pointed out:

To be honest, so far, I've not cut anyone's resources, but these negotiations are very important to me. I have unearthed this practice of keeping surplus resources without any clear reason. Forcing managers to explain why the resources weren't spent and to think about their future use leads to much value added for both parties.

The cycle closes in the September of the same year, before the new cycle is due to start, with a review of the performance achieved and the remaining resources.

Commenting on the benefits of the new approach, the Director said that a big plus was promoting the use of variance analysis in a strategic way, where "the adjustments to annual planning form the basis of planning for the upcoming years".

To summarise, resource programming use of costs was shown to be useful in terms of:

- Verifying the use of resources allocated for the programmed activities and strategic plan actions.
- Formulating proposals to update the plans and confirm that there are available resources.
- Formulating proposals to review the plans, defining the various objectives, which must be consistent with the process of monitoring the status of the strategic plan.

## Managerial implications

This study offers three cases of the strategic use of cost data, here referred to as organizational reshaping, service balance and resource programming. All three cases share a strategic



approach to the use of cost data. Costs have no negative connotation, rather they support a broader strategic action, although there are differences between one case and another.

The *organizational reshaping configuration* uses costs strategically to support internal office reorganization. The principal cost element considered is the unitary cost for each support service, which is benchmarked with that of the other universities to give a realistic reference target. Given the end objective of reorganising internal offices, we are looking at the long-term for this type of cost usage and the unit of analysis is represented by each organizational unit. The main “partner” of cost data is the volume managed by each support service.

The *service balance configuration* uses costs strategically, but with the final aim of assessing whether resources are properly allocated in order to generate value for users. Therefore, the principal cost element is the unitary cost of the support service, with the main “partner” being customer satisfaction. Each support service is analysed by examining unitary costs and user perception (measured through customer satisfaction data) jointly. In this configuration, the organizational offices are of secondary importance, since the main unit of analysis is the support service itself. Unlike the previous case of organizational reshaping, this configuration was studied for the medium-term, and the reference value is set over a shorter period of time.

The *performance management configuration* uses costs strategically to allocate resources and support budgeting negotiations, although it is not linked directly to the managers’ individual bonuses. In this specific setting, the attention focuses mainly on the total costs and on the resources assigned to each organizational unit, with the addition of benchmark values and output acting as the main “partner” to support budget negotiations with the directors in each university area. The period of time considered plays a major role in preparing the budget and in the ensuing negotiation process, relating mainly to the short term, and the cost data used relates to the budgeting cycle.

The three cost configurations presented above differ in several points concerning strategic elements, cost elements, time horizon, unit of analysis and performance “partner”. Table 5.3 summarises these elements and their diversity across the three uses.

Table 5.3 Summary of strategic cost configurations

	Organisational reshaping	Service Balance	Resource programming
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Strategic element	University positioning and development	N/A Quality and efficiency of support services	Resource allocation and reduction in surplus
Costs element	Unit cost: reference for efficiency at the macro-level and micro-level	Unit costs at the service level	Total cost
Time-horizon	Long term	Medium term	Short term
Aggregation driver for activities	Organisational units	Services	Budget units
Performance “partner”	Volumes	Customer satisfaction benchmark data of other institutions	Benchmarking value related to outputs

All the configurations, however, share two main building blocks that are common to a strategic approach to cost data. The first building block consists in connecting cost data to other “more qualitative” information. In all the cases covered, strategic decisions are based on cost data, but not only on costs. Cost data give an indication and this needs to be completed with other data and grounded in the existing organizational and strategic context.

The second building block is the process of benchmarking cost data. The unitary cost value is of limited added value and risks being linked to a negative perception of cost data. For cost data to be used strategically, the numbers should be connected to those of other organizations or recorded over time to show a trend. This real and substantial use of benchmarks is considered particularly valuable by the organizations involved, nevertheless, it is important to highlight some related issues. A first issue is the attention and time needed to carry out the benchmarking exercise, when data are used for actual organizational actions. It is known that benchmarking on costs needs a precise accounting from the technical staff, adapting internal costs to a common protocol (Arnaboldi and Azzone, 2004; Arena et al., 2009). What it is less pointed out is that the strategic use of costs needs the involvement of top manager not only in the decision-making phase but also in the “dirty” job of data collection. The cases highlighted that an effective approach was an open, reflective and interactive approach, where top managers and

technical staff discuss cost results going back to the accounting rules (Agostino and Arnaboldi, 2015).

It is interesting to underline that this chapter presented the experience of Italian universities, but the same approach of activity-based management to cost analysis has been replicated in other two public settings: municipalities and state museums. The theoretical model has been the same, but activities have been tailored to the specific context (either local government or museums). The benchmarking logic has remained as well. The dynamics observed in the usage of costs data were found to be comparable with the three dynamics described here and, again, went beyond the cost-cutting approach. These additional experiences, although limited in time, underline and further confirm the opportunities for costs data to move beyond their traditional negative perception and serve a strategic function.

To conclude, strategic cost management is a precious tool for the reflective manager, who wants to put consolidated practices under discussion. Costs are a representation of the organization, derived from accounting rules; discussing costs openly with a future oriented vision creates a the willingness in sharing ideas ” in managers, who do not feel judged, but part of the creation of something new. After the creation of this collaborative, but technically grounded, environment, the challenge for top managers remains to make decisions, even though they will always disappoint someone. Here two strategies were evidenced as supportive: the use of benchmarking to highlight better or worse situations and the sharing of results inside universities with the final aim of showing administrative activities that are under performing and over performing. the socialization inside universities of the results, showing situations that are actually under performing and other underperforming.

Reflective managers have in cost data and benchmarking a strategic ally, but they need to be ready to enter the technicality of accounting and discuss controversies with higher and lower level staff s.

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