International Research Study of Public Procurement

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CAPACITY & CAPABILITY BUILDING

LITERATURE REVIEW

NHS Purchasing and Supply Agency

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Capacity and capability – a systematic review

Introduction

Globally, governments are confronted with increasing demands from their users brought about by changes such as devolution, technological change, public-private partnerships technological change and globalisation. Consequently, public sector agencies are required to respond and adapt in a manner that meets these challenges. Such transformations are often associated with building capacity and capability, which has become a central theme for public policy (Hall, 2002), embracing a wide range of areas such as environmental concerns, healthcare, prisons and, increasingly, public procurement.

This systematic literature review has been conducted primarily for the 3rd International Research Study on Public Procurement, held in Paris 15th – 18th September 2007. The study's focus is on "Building Public Procurement Capacity and Capability" and brings together leading practitioners and academics in the field of public procurement to identify the gaps between *providers* of capacity and capability and *doers* - those involved in implementing capacity and capability building programmes. The doers are public sector organisations that have experienced difficulties because of lack of public procurement capacity and capability (PPCC) and the policy makers/providers are organisations that attempt to support public procurement development, whether it be locally, regionally, nationally or internationally.

Public procurement of goods, services and works represent a considerable proportion of a nation's expenditure, accounting for around 15% of the world's GDP and in some developing countries, may be as much as 70% (UNDP, 2006) . In recent years, attention has been paid towards the importance of public procurement in stimulating national, regional and local development. A consequence of this interest has been a realisation that if public procurement is to fulfil its potential as a driver of social and economic improvements, there is a need to focus the role of public procurement in building capacity and capability.

For example, In March 2005, The Paris Declaration on Aid Effectiveness (OECD, 2005) highlighted the need to develop the procurement capacity of developing nations. In response, the United Nations Development Programme (UNDP) has developed tools and techniques for procurement capacity development and procurement capacity assessment, offering a systemic and integrated means of strengthening and optimising national or local capacities. The

UNDP's approach complements the OECD Methodology for Assessment of National Procurement Systems, which measures the quality and effectiveness of national procurement systems.

In the UK, the Office of Government Commerce (OGC) has recently implemented the Procurement Capability Reviews, which aim to assess the capacity and capability of central government procurement to deliver value for money, today and in years to come. According to John Healy MP, Financial secretary to the Treasury:

"Good procurement is essential to delivering good quality public services, and we will only achieve good procurement across Government if we know we have the right skills and capability in place. This programme of Procurement Capability Reviews draws on the very valuable learning that has been obtained through the Treasury's Financial Management Reviews and the Cabinet Office's Departmental Capability Reviews, and will allow us to ensure that we have the information on which we can build a world class procurement capability across Government." (OGC, 2007)

The widespread uptake of the terms "capability" and "capacity" into everyday parlance, particularly by policy-makers, suggests a need to undertake a thorough and systematic review of existing literature and empirical evidence in order to enhance our understanding of how these terms are employed across sectors and disciplines. The study employs a systematic review of the literature as opposed to a traditional narrative review. Building on medical research methods, systematic literature reviews have gained increasing credence within management research (Tranfield et al., 2003; Denyer and Neely, 2004) and through the use of a transparent and reproducible process (Tranfield et al., 2003) aim to overcome the issue of researcher bias often evident in narrative literature reviews. Systematic literature reviews commonly employ a three-stage methodology as shown in Figure 1.

This review will commence by outlining each of the stages undertaken during the review of the literature. It will go on to report on the research that looks at "capacity" and "capability", providing both a descriptive and thematic analysis. The review will conclude by considering the key features of the research, implications this has for procurement before suggesting areas for future research.

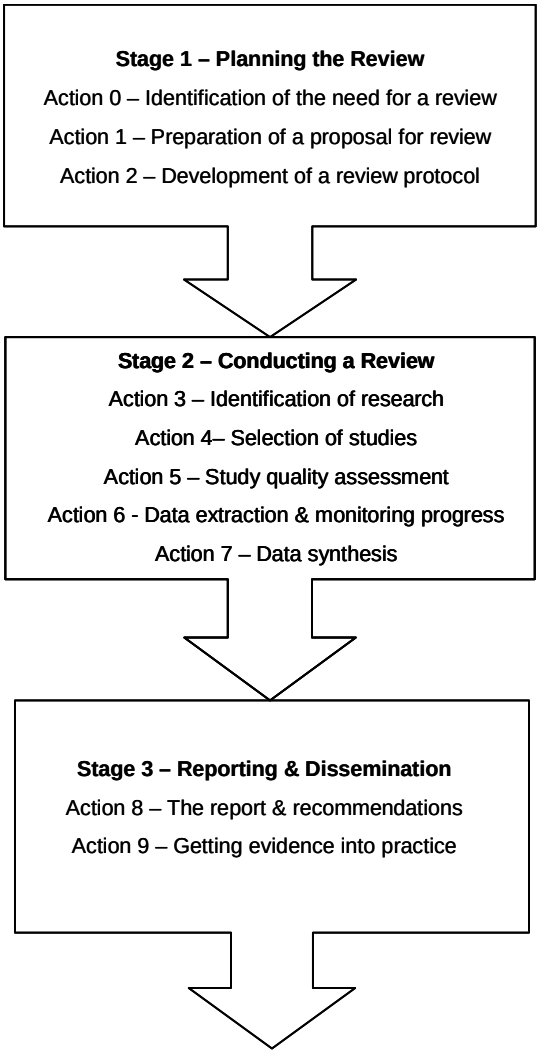


Figure 1 - Stages of the systematic review (adapted from Tranfield et al. 2003)

Stage 1: Planning the review

A review panel was established to identify define the scope of the study and support the process of study selection. In line with recommendations proposed by Tranfield *et al* (2003), the panel consisted of experts in methodology and theory and leading practitioners operating in the field of study – in this case, the field of public procurement. The objective of the review is to identify the factors influencing capacity and capability at a local, regional and national level. A management review protocol was designed to support the process, however, unlike medical science reviews, the protocol was sufficiently flexible to allow creativity, but sufficiently structured to avoid any researcher bias affecting the outcome (Tranfield *et al,* 2003).

Stage 2: Conducting the review.

The literature search begins with keywords and search terms (Tranfield *et al*, 2003). For this study, we selected the following keywords and strings: "capacity and capability"; "capability and capacity"; "capacity development" AND capability; "capability development" AND capacity; "development of capability" AND capacity"; "development of capacity" AND capability; "building capability" AND capacity; "building capacity" and capability; "capacity building" AND capability; "capability building" AND capacity. An initial search was conducted of all document text entering theses search keywords into Proquest.

ProQuest is a comprehensive electronic database covering to over 10,000 articles and was selected for its high quality indexing and abstracting which supports precise searching, resulting in a high proportion of relevant hits. The date range employed was from the 1st Jan 1987 up until the 30th May 2007, any articles added to the database after this date were ignored.

Criteria to Select Sources

A set of characteristics were identified to support the selection of high quality, relevant material. Table 1 and Table 2 show the inclusion and exclusion criteria. Following the initial search of ProQuest, these criteria were employed to reduce the number of citations. This selection process involved two stages. The first stage involved using ProQuest's subject search tool to exclude irrelevant articles dealing with issues that were not pertinent to the review. For instance, papers that focused on the carrying capacity of water supply systems were excluded through the search string "AND NOT water supply systems [SUBJECT]".

The second stage involved analysing the abstracts of the remaining documents according to the inclusion and exclusion criteria outline in Table 1 and Table 2; in instances of doubt further verification was achieved through reading the entire document. The remaining citations were then reviewed according to the quality review criteria identified by Pittaway *et al* (2004) and, through the use of Endnote, any duplicates removed. At the end of this process 162 articles remained.

Table 1 Inclusion criteria

Criteria	Reasons for Inclusion
All industries and sectors	To gain a wide picture of the factors that affect capacity and capability development– not just limited to one area.
All countries	To ensure a cross-cultural view of capability and capacity development.
Barriers to capability & capacity development	To identify the factors that inhibit capacity and capability development
Enablers to capacity and capability development	To identify the factors that enable capacity and capability development

Table 2 Exclusion criteria

Criteria	Reasons for Exclusion
Studies of individual capacity and capability development	This is not in the local, regional or national context.
Organisational studies	This is not in the local, regional or national context
Flexible manufacturing systems	Such studies are operational in context and do not relate to building capacity at a local, regional or national level
Capacity assessment (medical decision-making)	To exclude the studies focusing on assessment of an individual's psyche.
Water supply	To exclude the many studies relating to the carrying capacity of water systems
Book reviews, letters	Not pertinent
Leadership	Focus is on the individual as opposed to the local, regional or national context

Stage 3: Reporting and dissemination

According to Tranfield *et al* (2003) a good systematic review should present the primary research upon which the review is founded in a clear and coherent manner, which can be readily understood by the practitioner. In line with Tranfield *et al* (2003) we undertook this in two phases:

1. *A Descriptive analysis* of the area in terms of field of study, key journals and key sectors studied and
2. *A Thematic analysis* – to outline what is known and established within the selected documents, and also to identify the key emerging themes.

The following sections present these two phases.

Descriptive analysis

The systematic review was undertaken using the methodology outlined above. At the initial stage of the review 2949 papers were found. Once the exclusion criteria were added to the search strings the number of citations were reduced to 2717. Following the review of the abstracts and, in some cases the whole documents, using the inclusion and exclusion criteria, 162 papers remained. Table 3 shows the number of relevant citations that were identified at each stage of the review.

Table 3 Number of citations identified at each stage of the review process

Stage	Number of citations
Initial review using ProQuest	2949
With exclusion criteria	2717
Abstract analysis employing inclusion and exclusion criteria	162

This study found that capacity and capability are studied in a broad number of fields including health, public administration, management, economic development, social and economic policy, planning and environmental studies (see Table 4). Within management the majority of journals were general management journals, although innovation and technology management and operations management journals had a strong representation.

Table 4 Breakdown of the field of study of the selected journal articles

Field of Study	No of articles	%
Health	41	25.30
Public Administration	23	14.38
Economics/economic development	31	19.14
Social Policy	8	4.94
Management	40	24.69
Planning	5	3.09
Science and Technology	2	1.24
Environment	3	1.85
Other	8	4.9
Total	**162**	

The key journals undertaking research into capacity and capability are indicative of those fields carrying out the majority of studies on capacity and capability: *Public Administration and Development; Journal of Public Health Management and Practice; Health Promotion International; Academic Emergency Medicine; Promotion and Education; Journal of International Development; OECD Journal on Development; Journal of Technology Transfer; Industry and Innovation; Industrial and Corporate Change; Education and Training.* In addition to these journals, the review retrieved citations from a further 95 journals, which could either be interpreted as the widespread interest in capacity and capability or the widespread use of these terms.

A sectoral analysis and thematic review were carried out on the selected papers (see Table 5) in order to develop an understanding of not only the key sectoral focus of papers, but also the focus of the studies within these sectors. From this it can be seen that the much of the research into capability and capacity looks at health, public administration, industry and economic development respectively. Health-related studies accounted for nearly a quarter of all the selected studies and it was found that these studies predominantly focused on health promotion and prevention programmes, followed by a strong interest in health care management and community health.

Studies on public administration appear to focus on a variety of issues, although performance evaluation and assessment appeared to feature strongly. Although industry-related studies accounted for nearly 15% of the selected documents, the studies were dispersed amongst a variety of different industries, although studies did appear to steer towards manufacturing, ITC and biotech. Finally 12% of the articles related to development studies and this was at the international, national, regional and local level.

Table 5 Sectoral analysis of selected papers

Sector	**No. of papers**	**% of sample**
Health	**40**	
Performance evaluation	5	
Management	6	
Research	5	24.69
Nursing	1	
Community	6	
Health promotion/prevention programmes	17	
Defence	**7**	4.32
Military medicine	2	

Emergency/disaster relief	**14**	8.64
Public administration Human resource management Governance Performance evaluation/assessment	**27** 3 3 6	16.66
Education Education systems Higher education	**8** 5 3	4.94
Development/aid	**26**	16.05
Industry Hi-tech ITC Biotech Manufacturing pharmaceutical Construction Service MNCs	**24** 2 4 4 5 1 1 1 1	14.81
Policy	**2**	1.23
Environmental	**5**	3.08
Research	**4**	2.47
SMEs	**5**	3.09
Total	**162**	

The papers were analysed according to the countries studied within the articles. It was found that the USA had the strongest representation with 32 papers; 26 papers focused on European countries (the UK, with 11 papers, appeared most frequently); there were 17 papers on Africa (South Africa appeared most often, with 5 papers); 16 papers focused on Asian countries. There were also 17 international comparative studies and 11 studies that focused specifically on developing countries. Other countries represented included Canada (9 papers) and Australia (8 papers). The number of papers that have empirical data on the USA is high, suggesting that US academics have made a significant contribution to studies relating to capacity and capability.

The papers were also analysed according to publication year. It is clear that interest in both capacity and capability is rising, particularly since the advent of the new millennium. In the 1990's only 19 papers were identified compared to 121 for the period of 2000-2006. This discrepancy may be attributed to poor coverage in the citation databases, but may also suggest growing interest in capability and capacity. This is also reflected in the marked increase in the time period from 2000 to 2006. 11 papers were identified that were published in 2000, whereas 32 papers were identified for 2006.

In summarising the evidence employed by this study, it can be seen that the focus of the studies relating to capacity and capability are related to the public sector, particularly health and health promotion programmes. Although nearly 20% of papers focused on the USA, the research does appear to be international in nature, with particular attention being paid to developing countries, suggesting growing interest in the delivery of capacity and capability programmes in these nations. The evidence-base employed by this review also shows that interest in this area of study has increased over the past twenty years, accelerating over the past five years. The research also encompasses a wide range of journals, disciplines and authors, which suggests a need to amalgamate these studies if a shared understanding of the relationship between capacity and capability is to be achieved.

The premise of this systematic literature review was to provide a systematic and comprehensive review of current knowledge on capacity and capability and to gain an understanding of the approaches employed by different sectors when tackling issues relating to capacity and capability. This section has provided a descriptive analysis of research undertaken in this area. The next section will provide a thematic analysis, commencing with an overview of what is meant by the terms “capacity” and “capability”, before considering each concept in more detail.

Thematic analysis

Capacity and capability

No review of capacity and capability can go without differentiating between capacity and capability, although it was found that many articles switched freely between the two terms. Franks (1999) attempts to make a distinctions, defining capability as "knowledge, skills and attitudes of the individuals, separately or as a group, and their competence to undertake the responsibilities assigned to them." (Franks, 1999. p. 52) In contrast, he defines capacity as, "the overall ability of the individual or group to actually perform the responsibilities." Franks points out that the ability to complete a task is not only dependent upon people's capabilities, but also upon the scale of the assignment, the level of resources required, and the context in which they are performed.

Franks definition is in line with that employed by the World Bank. Applied at the level of the state and government, the World Bank (1997, p.3) defines capability as "the ability to undertake and promote collective action of whatever nature and its consequences" whereas capacity is "the ability to use available capability to meet the concerns and objectives of society".

In the selected literature, the most commonly adopted definition of capacity is that proposed by UNDP (1998): "the abilities, behaviours, relationships, and values that enable individuals, groups and organisations at any level of society to carry out functions or tasks and to achieve their development activities over time" (UNDP, 1998). The UNDP's definition appears to embrace capacity and capability, highlighting the synonymy of the two terms, which may explain why authors interchange between the phrases so readily. However, as Honadle highlighted back in 1981, it is highly unlikely that an agreement will be reached in terms of defining capacity and nearly 30 years on this still appears to be the case.

According to Hall (2002), regardless of definition, one cannot ignore the politics of capacity since the political environment may influence the options regarding resource allocation. Despite utopian notions of what capacity is, Hall suggests that in reality discussions will end up focusing on operational issues such as: "How much capacity is enough, too much, too little? What additional capacity is necessary? What does capacity cost? How should capacity investments be evaluated, how frequently? How can adequate capacity be sustained?" (Hall, 2002, p. 24)

Capacity

Capacity-building

Although there is no agreed consensus regarding capacity, it has now become a central theme, particularly within the development community. Debates surrounding "capacity" are believed to have initially emerged in the 1980s, following the publication of the Berg Report (World, Bank, 1981), when it was used as an all-encompassing term to address the need for developing nations to take on responsibility for their own advancement (Clark, 2000).

The concept of "capacity-building" arose from the recognition of the need to embrace a wider view that went beyond economic and institutional development to include the development of physical, human, organisational, social and cultural capital (Ogilivie *et al*, 2003). The commonly accepted definition of capacity-building, and the definition employed by this paper, is that proposed by the UNDP (United Nations Development Programme): "*the process by which individuals, groups, organizations, institutions and countries develop their abilities, individually and collectively, to perform functions, solve problems and achieve objectives"* (UNDP, 1997) .

Alaerts *et al* (1997) point out that the widespread popularity of the concept of capacity building nearly renders the term meaningless, generating a misperception that it simply relates to skills and abilities. Consequently, in 1991 the UNDP held a conference in Delft, in order to develop an understanding of capacity building and proposed that it consisted of the following three elements:

- The creation of an enabling environment with appropriate policy and legal frameworks
- Institutional development, including community participation
- Human resource development and strengthening the managerial system.

Capacity and capacity-building is of the utmost importance for public policy (Hall, 2002) and, as this literature review has discovered, encompasses a wide range of topics. The focus of capacity-building approaches varies across domains as demonstrated in Table 6 and it is accepted that there is no ideal or general approach (Loza, 2004). Adopting a holistic view, The United Nations Conference on Environment and Development (UNCED), held in Rio de

Janeiro, in 1992 proposed that capacity-building "*encompasses the country's human, scientific, technological, organizational, institutional and resource capabilities. A fundamental goal of capacity building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environment potentials and limits and of needs perceived by the people of the country concerned"* (UNCED, 1992). In his review of capacity-building, Loza (2004) identifies five areas for capacity building:

- human resource development,
- research and advocacy,
- information access,
- use and dissemination of information,
- organisational development (including networking, alliance building and coalitions)
- financial sustainability

Table 6 Capacity building approaches

Domain	Capacity-building defined
Community health (Goodman *et al*, 1998; Labonte *et al*, 2002; Jackson *et al*, (2003).	Building of transferable sustainable skills, resources that relate to health promotion programmes across different levels
Community-organisation (Loza, 2004)	Contribution by private sector to meet the economic and social needs of its local community
Health (Milèn, 2001)	Ability to perform specified functions in a manner that contributes towards the objectives of the team, organisation and health system
Health research Sajiwandani (1998), Reddy *et al* (2002), Baldes et al, 2007)	Build research outputs to improve decision-making. health service delivery and influence policy-making within a particular area
Public administration (Honadle 1981; Hall , 2002)	Build the skills of government officials to address problems, evaluate policy alternatives and implement government programmes
Emergency/disaster relief (Shrover, 2007)	Expand medical humanitarian care facilities/resources to meet the surge in need.
International development (World Bank , 1997; Ogilvie *et al*, 2003; Clark, 2000)	Build the skills of public agencies in developing countries to address capacity issues.
Human resource management (Faramand, 2004)	Building and enhancing highly qualified, motivated and able individuals across all levels

Capacity-building strategies

According to UNDP (UNDP, 1998) capacity-building strategies can be classified into four types:

1. The technical and organisational approach
2. The systems network approach
3. The social approach
4. The political approach

Each approach is summarised in Table 7. The technical and organisational approach is the traditional approach to capacity-building. However, in the 1980s, growing pressure to address environmental issues resulted in a growing awareness that individual organisations did not have the capabilities to address such problems on their own. The advent of globalisation and the "new economy" (Zadek, 2001) also brought about a blurring of boundaries between the public and private sector and a trend towards approaches such as outsourcing and public–private partnerships. At the same time these changes brought transformations in the non-profit sector, placing them under more pressure to deliver services (Loza, 2004). The end result was a change in the nature of capacity-building towards a systems and network approach that considered organisations' external and contextual influences, the demands of key stakeholders and their relationships, where systems or networks of organisations worked together to bring about improvements.

Social networks are intrinsic in bringing about these improvements, whether it be within a single organisation, or at a system or network level. The social approach arose from identifying the need to build on social relationships to promote partnerships and collaboration, recognising that capacity-building is as much as it is technical and organisational in nature. Finally, the political approach addresses the role of governance – without a stable and supportive political environment, it is difficult to implement or encourage donors to consider any capacity-building programmes.

Table 7 Capacity-building approaches (adapted from UNDP, 1998)

Approach	Advantages	Disadvantages
Technical & organisational approach Focus on internal improvements to individual formal organisations. Looks at how organisation manages different functions e.g. procurement or service delivery and aims for improvements within each component .	Able to quickly address specific issues through approaches such as TQM, re-engineering and results-	Short-term & specific focus of approach unable to deal with system-wide issues

Problems generally identified: poor structure, systems & skills (lack of). Usual solutions: training, technical assistance, internal administrative development.	based management	
Systems & network approach Managing the relationships & interactions between organisations as well as improving the performance of individual organisations. Focus on co-ordination, management of diverse perspectives & conflict resolution. Combines resources in different parts of the systems to address problems. Public and private partnerships play an important role. Public organisations can provide legitimacy, public goods & services. Private organisations: technology, productivity & management expertise.	A well-managed partnership can deliver a service that neither organisation could deliver in isolation. May result in new collaborations, inspiration and solutions for each party	Trying to coax communities &/or networks of organisations to collaborate and move in the same direction.
Social approach Recognises the importance of social relationships in promote effective ways of working, making it easier to organise, make decisions, manage risk, communicate, acquire information, services and resources. Particularly pertinent at the local level. Identifies a need to exploit social capital where strong and build on it where it is weak. Requires organisations with facilitation & brokering skills	Works well where social capital is strong and community action plays a significant role, strengthening human values, patterns and behaviour.	Difficult to implement where social capital is low and communities are troubled with isolation, distrust & divisiveness.
Political approach Recognises the role of governance in relation to capacity-building. Requires a political system that places an onus on performance, protecting vulnerable technical and organisational systems from excessive interference. Much s much about demand as it is about supply i.e. addresses the needs identified by its citizens.	Creates incentives and pressures for government organisations to deliver innovative solutions, especially at the local level	Lack of a strong political environment may discourage donors from proceeding with technical aspects of capacity building. Political change can take a long time to occur

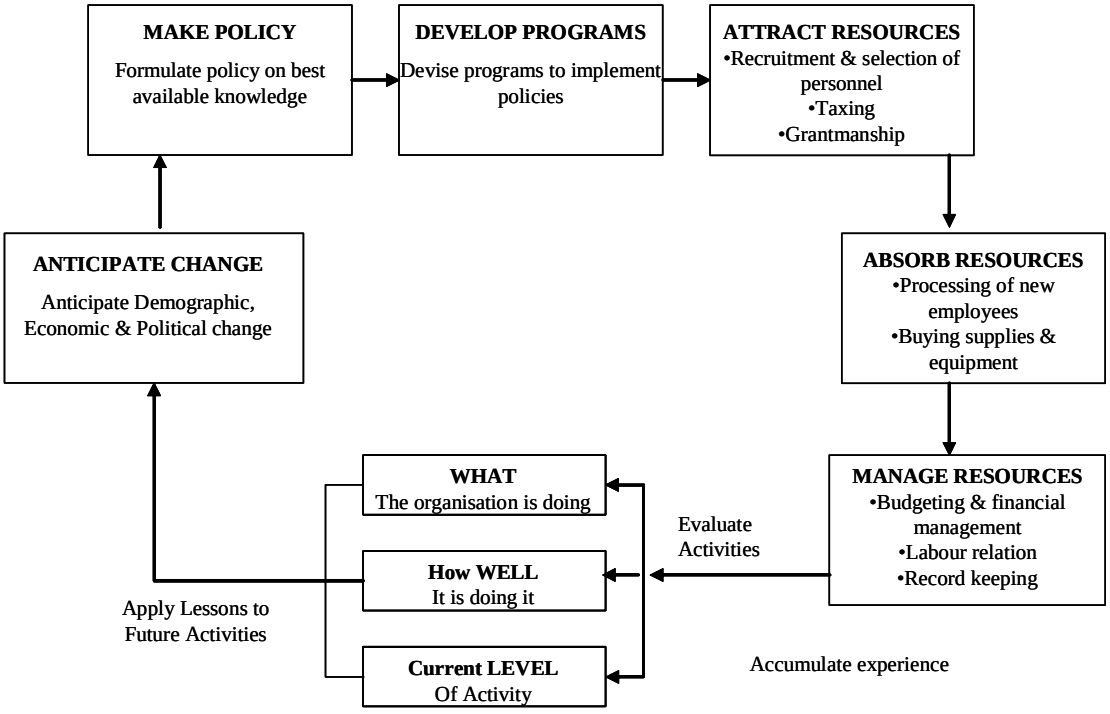
Capacity-building as a process

Since capacity-building occurs over time, it should be perceived as a process as opposed to a single intervention (Ogilvie *et al*, 2003). Generally, it is viewed as a systemic as opposed to linear process (e.g. Weidner, 2002; Honadle, 1982). Honadle has developed a framework to demonstrate the systemic nature of capacity-building (see Figure 2). To succeed, capacity-building should include each of the following components. The ability to:

- anticipate and influence change
- make informed, intelligent decisions about policy
- develop programmes to implement policy
- attract and absorb resources
- manage resources; and
- evaluate current activities to guide future actions

For instance some organisations are extremely competent in attracting funding, but for the donors it is important that these organisations can actually manage the funds and learn from their experiences. Without the staff, skills and time to use the funds in the appropriate manner, programmes cannot be implemented effectively. A *capable* organisation can negotiate each of the steps, "managing its physical, human, informational and financial resources" (Honadle, 1981, p.378).

Figure 2: Capacity-building framework (Honadle, 1981, p.378)



Janicke (1997) and Weidner (2002) propose a similar framework, with a focus on environmental capacity-building, they view capacity-building as a mulifactorial process (see Figure 3), influenced by:

1. Actor groups
2. Cultural, political and economic conditions
3. The nature of the problem – how easily it is to develop a solution, the systemic nature of the problem; whether it is conventional or latent/creeping (Weidner, 2002).

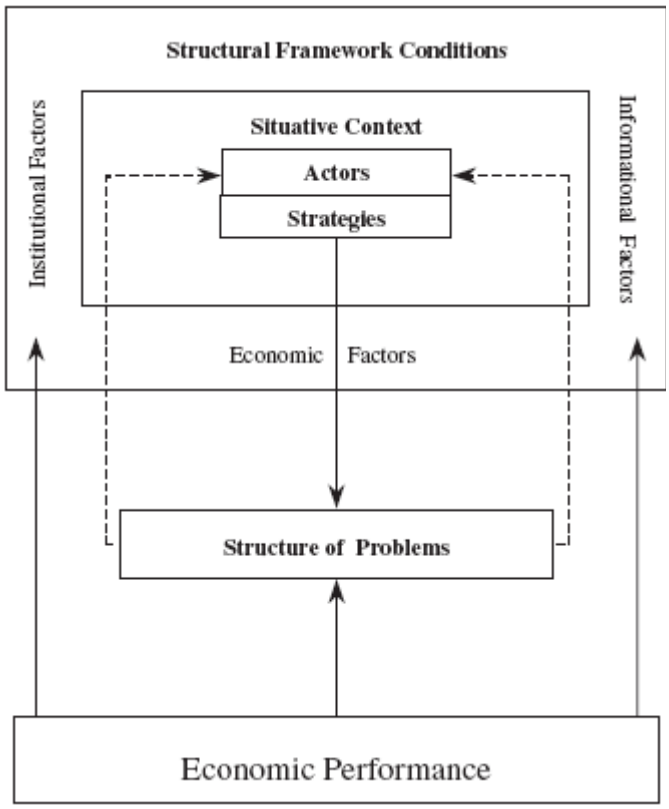


Figure 3: The Capacity-building Model of Policy Explanation (Source: Jänicke, 1997)

In an overview of capacity-building approaches, Milèn (2001, p. 2) identifies six key processes that are characteristic of good and successful practice:

1. *Building local ownership and self-reliance*. Organisations must take on responsibility for their own capacity building programmes, directing donors accordingly.
2. *Practicing genuine partnerships.* This involves establishing networks and alliances with key stakeholders, the sharing of goals and decisions. It requires strong communication skills and agreement on needs and outcomes.
3. *Understanding the context specificity of capacity and its development*. Defining "capacity for what" and ensuring that capacity building is seen as an integral process as opposed to an offshot of a project.
4. *Examining capacities in a context of systems and strategic management*. Those involved must have resources, commitment, strategic thinking, technical skills, political sensitivity and persistence. Any relevant expertise should be exploited.
5. *Long-term commitment of partners*. There must be a clear understanding of the capacities that are needed now and in the future; capability-building initiatives should be flexible and adaptable, employing suitable methodologies.

6. *Exercising the process-thinking in all phases of capacity-building* such as setting objectives, strategic planning, action, monitoring and evaluating results, promoting a holistic view rather than a focus on inputs and outputs.

Factors affecting capacity

Studies of capacity-building differentiate between different levels and dimensions (Batley, 1995; Bennett and Mills, 1998; UNDP, 1998; Jackson, 1999) The UNDP identifies three levels: the micro (individual), the meso (organizational), the macro (systemic level) (UNDP, 1998). The concept of levels does not imply that capacities must be tackled at every level in a single programme, but suggests the need to identify the limiting factor - a problem at one level may have implications for the system as a whole (Milèn, 2001). Further, the effective use of capacities may be influenced by external influences as well as those that are internal and it is important to take these factors into consideration (Bennett and Mills, 1998; Jackson,1999); Table 8 summarises internal and external factors affecting capacity.

Table 8 Internal and external factors affecting capacity (adapted from Bennett and Mills, 1998; Jackson, 1999)

Internal factors	External factors
1. Human resources in terms of hiring, training and retaining	1. Financial and economic conditions
2. Management – clear set of guiding principles which is supported by organisational and administrative structures that	2. Institutional e.g. rules and regulations, legislation, management practice
3. Finance and capital – acquiring funding, the efficient use of financial management systems	3. Political and social influences e.g. sustainability
4. Information systems – effective and compatible information systems which support clear communication	4. Interorganisational relationships e.g. public-private partnerships

In bringing together and managing these internal and external influences, Kaplan (1999) proposes that an organisation with capacity has the following six components, listed hierarchically:

1. A conceptual framework that mirrors the organisation's world view
2. An organisational attitude that enables the organisation to operate in a manner that is effective, but also impacts and takes on responsibility for the social and physical conditions of the external environment
3. A clear organisational mission statement and strategies
4. Defined organisational structures and procedures that reflect and support the mission statement
5. The requisite skills and competencies

6. Sufficient material resources.

Consequently, it would appear that approaches to capacity building have embraced a wider systems thinking. Any initiative needs to be considered needs to be considered in terms of its position within its system in order to address the obstacles and enablers that are inherent to that system. This requires taking into account the current political, economic and social environment, the partnerships that the organisation is involved in and the institutional framework. It also requires an assessment of an organisation's internal environment as this will influence its output and its behaviour.

Measuring capacity-building programmes

Although the measurement of capacity building programmes has been somewhat overlooked in the past (Milèn, 2001), there has been a growing move towards the measuring the effectiveness of capacity-building programmes, particularly by donors who wish to know how effective the programmes have been (Wing, 2004). In their study of federal courts, Wise and Christensen (2005) suggest that administrative capacity should be assessed along three dimensions: accountability, decision-making process, and resource adequacy. Administration provides a simple means of conducting further studies of capacity and involves assessing whether there are sufficient statutory, regulatory and political guidelines to ensure that the organisation is operating beyond its own values and is line with those its external environment. Assessment of decision-making focuses on the process as opposed to the environment. Ensuring that decisions are based on deliberation and prudence, guide by the organisation's overall vision. In assessing resource adequacy, the focus should not be on determining which existing resources may be allocating towards overcoming any inadequacies, but the ability to gather the resources needed to provide a solution.

Finally. In comparing the capacities of national administrative organisations in Sweden and the US, Wise et al (1996) focused on the following three dimensions:

1. *Public interest* - factors that influence an organisation's ability to operate in a manner that advances the public interest e.g. political processes
2. *Economic* – factors that enable the organisation to operate within its political economy e.g. public-private partnerships

3. *Management* – the tools and systems supporting or preventing managers to improve their organisations' effectiveness. This is influenced by three key issues: the complexity of the public sector system within which the organisation functions; the degree of autonomy granted to the organisation in managing its role within this system; the power and utility of the policy instruments and tools that the organisation can employ to manage internal and external relationships.

However, as Wing (2004) points out, there are some fundamental issues that need to be considered when assessing capacity-building programmes:

1. *How can an abstract concept be accurately measured?* Capacity building can vary from a small number of volunteers to complex healthcare systems. Obviously approaches will vary significantly and as a result there is no single generic approach that can be applied when measuring the effectiveness of capacity-building programmes.
2. *How can performance improvement be measured when performance cannot be measured?* Measurement involves standard units; however activities which are common to capacity building, such as strategic planning, have no measure of performance. Measurements of single aspects of organisational performance may be possible, but will be resource intensive and will require an understanding and agreement on what improvement means.
3. *Which goals should improvement be measured against*? Capacity-building approaches often employ many different goals, however this are often misaligned. Consequently, all actors need to agree on shared goals.
4. *Unrealistic timetables for capacity building and its evaluation.* Capacity-building takes time, often years and it is rare for an evaluation to occur beyond the end of an initiative. Although funding directors may wish to see immediate outcomes, it is not realistic to expect a significant improvement before an intervention has had an opportunity to bring about change.

Summary

Approaches to capacity and capacity building have moved away from an individual focus to a wider systems view, where the actions of an individual or organisation have implications for the system to which an individual belongs. Such a view does not necessitate the need to undertake systems-wide programmes, but the need to appreciate the contextual setting and the influence of internal and external factors.

Capacity-building appears to consist of three stages:

1. Understanding and evaluating the nature of the problem – relating it to existing capacities and relating it to the context.
2. Resourcing and implementing the process – identifying the level of activity, the key actors involved and the type of approach.
3. Measuring the outcome – identifying what needs to be measured and why, using realistic timeframes and qualitative as well as quantitative techniques.

However, as highlighted earlier capacity building is a long-term and dynamic process which requires a shared understanding of the goals and objectives by all the interested parties. This section on capacity and capacity building aims to provide an overview on the concepts and approaches to support those involved in the development and implementation of capacity building programmes. Having reviewed the literature on capacity we now go on to consider its close synonym – capability.

Capability

The majority of articles selected for the literature review focused on capacity as opposed to capability, which may attributed to the synonymous nature of the two terms. The literature identified that did relate to capability, tended to have an industrial as opposed to public sector focus, looking at either enhancing a firm's competitive position or a nation or region's industrial/economic performance. As a result, the selected literature generally concentrated either on:

1. Organisational capabilities – an organisation's specific skills and resources.

or

2. Technological capabilities and the approaches countries employ to improve their economic systems (Clark, 2000; Hall, 2005)

Organisational capabilities

The origins of organisational capabilities lies in the work carried out by Frank Knight and Edith Penrose and their contributions towards the resource-based view of the firm (RBV). Here the firm is considered in terms of a bundle of resources. Knight (1921) suggested that the manner in which a firm dealt with uncertainty was related to the way in which it organised its competencies and individual activities (Hodgson, 1993). Penrose (1959) led on from this, investigating how the manner in which the firm built on its knowledge base determined how it built on its production set. Like Knight, Penrose accepted that the firm was subject to differentiation- individuals organised into focused groups, each with their own function (for example, marketing, production). In addition, Penrose highlighted the contribution of tacit knowledge and the untransferrable nature of knowledge within the firm towards this process of differentiation.

According to Penrose, managers are confronted daily with more decisions and more tasks. As these decisions and tasks become more familiar, or routine, the manager no longer needs to approach them using a formal or articulated approach, but instead one that is based on tacit knowledge. By routinizing these tasks, the manager is able to devote more of his time to those activities that still require a more formal approach. As a result of this, managers are able to expand their range of activities and thus those of the firm as well.

This transformation of formal and articulated knowledge into informal, tacit knowledge is defined as *internalisation* (Nonaka and Takeuchi, 1995 and Hedlund,1994) and is perceived by Penrose as a way in which firms can economise on management's decision competencies (Knudsen, 1996), enabling managers to focus on finding new solutions and so promote the growth of the firm.

Penrose also focused her attentions on the internal organisation of the firm. As mentioned, Penrose saw the firm in terms of individuals organised into focused, functional groups. Like managers, these groups accumulate knowledge through internalisation. When confronted with a problem, the group must co-ordinate their individual activities in relation to each other. At first this will take a great deal of time and effort but eventually this process of co-ordination will occur almost automatically, creating time for work to be carried out on other tasks. Such co-ordination is of great value to the firm. As Penrose highlights:

> "When men have become used to working in a particular group of other men, they become individually and as a group more valuable to the firm in that the services they can render are enhanced by their knowledge of their fellow workers, of the methods of the firm, and of the best way of doing things in the particular circumstances in which they are working." (Penrose, 1959: 52)

Such knowledge is firm specific and non-transferable. These skills are built up over the years, through experience. Thus, when an individual moves to another firm or organisation, he or she will not be able to replicate these skills since they are built around the individual, the firm and the environment at that time.

The dynamic capabilities approach builds upon this resource-base perspective. However, rather than simply viewing the firm as a set of individuals each with their own knowledge and skills, it also considers the manner in which these individuals are organised and re-organised in anticipation and / or response to their external environment (Teece and Pisano, 1994). According to Teece (1986), the firm can be seen to possess a set of firm-specific capabilities, which involve the strategic management of the firm's structures and routines and, knowledge and skills in a manner that is to the firm's competitive advantage. Such capabilities are referred to as a core competence by Teece:

> "A core competence is a set of differentiated skills, complementary assets, and routines that provide the basis for a firm's competitive capacities and sustainable advantage in a particular business" (Teece, 1990: 28).

The differential manner in which firms may manage their capabilities gives rise to firm resource heterogeneity, which in itself can lead to competitive advantage (Barney, 1991). However, a capability must be highly distinctive (not easily replicated by competitors) if it is to be considered as a *strategic competence.* Such capabilities develop over time through the accumulation of knowledge, both tacit and codified. Yet, in today's ever-changing world a firm needs to be able to adapt rapidly to new constraints and demands; that is it must act in a *dynamic* manner if it is to remain ahead of it rivals.

Much of this is dependent upon the senior management and their ability to successfully organise and integrate its routines or its pattern of practice and learning (Teece and Pisano, 1994). Metcalfe and Boden (1992) put forward the notion of an *organisational operator* who, by means of internal and external communication, is able to organise these routines into a collective competence. This leads on to Arrow's code of communication whereby it is suggested that it is the level and frequency of communication with the external environment and the manner in which this is disseminated throughout the firm that determines the organisation of the firm's activities (Arrow, 1978). The way in which this is carried out may vary from firm to firm and can account for how different firms choose to react when confronted with the same set of issues. However, as mentioned earlier, each firm's routines are different due to the nature of the individuals and the knowledge they possess and this also contributes towards the firm's course of action.

Nelson (1992) highlights the need for coherency when dealing with organisational capabilities. To some degree this is already present as a result of routinization; learning by doing. However, there is still a need for a strategy to arrange how the capabilities are utilised and whether new ones must be acquired and, if so, how. In addition, as Teece *et al* (1990) point out a firm's capabilities can constrain its strategy:

> "Because of imperfect factor markets, or more precisely the non-tradability of 'soft' assets like values, culture, and organisational experience, these capabilities generally cannot be acquired; they must be built. This sometimes takes years - possibly decades. The capabilities approach

accordingly sees definite limits on strategic options at least in the short run. Competitive success occurs in part because of policies pursued and experience obtained in earlier periods." (Teece *et al*, 1990, pp. 30 -31)

According to Leonard-Barton (1992), although the concept of core capabilities recognises the importance of distinct technical systems such as managerial systems, skills and procedures it fails to recognise the influential role played by the firm's culture and values. She also suggests that sometimes the firm's core capabilities may act as **core rigidities**, preventing the firm from pursuing certain opportunities and so acting as an obstacle to change and development. Therefore managers are faced by a paradox: how do they exploit their core capabilities without being hindered by their "dysfunctional flip side" (Leonard-Barton, 1992).

Managing organisational capabilities

Following evolutionary principles, there is no way in which an organisation can rationally select the optimal strategy; the market is too uncertain. However, there may be aspects of the organisation within which management has some degree of confidence and vice versa. Bakker and Nihof (2002) suggest organisations should attempt to differentiate between internal and external capabilities. Bakker and Nihof build on Verona's (1999) notion of functional and integrative capabilities (see Table 9) whereby functional capabilities enhance a firm's technical knowledge whereas integrative capabilities enable firms to absorb and disseminate new knowledge.

Table 9 External and internal integrative capabilities adapted from Verona (19990 by Bakker and Nihof (2002)

External integrative capabilities	Internal integrative capabilities
Managerial processes –external communication, socialisation	*Managerial processes* – internal communication, integrative strategies, political and financial support, performance measurement
Managerial systems- empowerment incentives, recruiting	*Managerial systems*- job training, collective brainstorming, incentives
Absorptive structures – networks of collaborations	*Integrative structures* – process integration, organisation re-engineering
Culture and value for external absorption	*Culture and value* for internal integration

Through differentiating between internal and external integrative capabilities enables organisations to translate perceived (external) stakeholder perceptions and interests into

(internal) responses, in other words translating external signals into internal actions. In order to describe and analyse the capability-building process Bakker and Nihof have developed a plan-do-check-act cycle (see Figure 4). Such a framework can be used to act as a guideline for developing new organisational initiatives or can be used to assess existing initiatives in order to assess their breadth (Bakker and Nihof, 2002). In developing the framework Bakker and Nihof recognise that in addressing the difficulties of firm specificity it is difficult to develop a uniform approach, unless it is presented in a very general manner, however it can be used to identify why capabilities are lacking and the possible outcomes of such omissions.

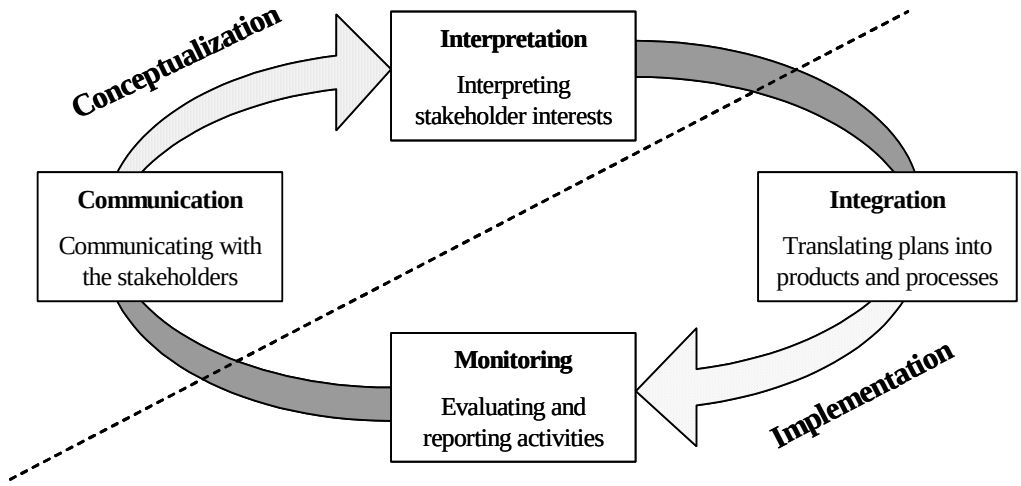


Figure 4: The capability cycle (Bakker and Nihof, 2002, p.68)

Technological capabilities

Here, as the phrase suggest, the focus is on technological development and draws on. Schumpeter's concept of innovation, which has been fundamental in highlighting the contribution of technology towards economic growth. Often referred to as the 'neo-Schumpeterians', evolutionary theorists have drawn upon some of Schumpeter's key insights to develop an enhanced understanding of the process of innovation and technological change. Growing recognition of the interactive relationship that exists between technology and the economy has led to a move away from the mechanistic models developed by mainstream, neo-classical economists and towards an evolutionary approach (Nelson and Winter, 1982)

The interactive nature of the process of innovation is now widely acknowledged and accounted for by the systems approach to innovation. Many different studies have been

carried out since Lundvall first introduced the systems of innovation approach in the 1980s (Lundvall, 1988). The standard interpretation is that of a National System of Innovation (NSI) proposed by Freeman (1988), Nelson (1988) and Lundvall (1992) and is employed as a means of understanding the way in which countries and organisations innovate; it is defined as a 'set of organisations, institutions and linkages for the generation, diffusion and application of scientific knowledge operating in a specific country' (Galli and Teubel, 1995, p. 354). The NIS approach is now being employed to help build innovation at a national, regional and sectoral level (OECD, 1997; Hall, 2005).

The pursuit of innovation is becoming a multi-dimensional interactive process involving users and other actors such as government bodies and non-governmental organisations (NGOs). Adopting a systems approach as a framework for analysis, it is possible to observe the linkages that exist between firms and other actors within the system and how they help shape the innovation process with respect to the building of technological capabilities. Crucially, the NSI approach recognises and distinguishes between the role of institutions and organisations. Organisations include firms, research institutes, government and non-government organisations whereas institutions are: "*Institutions are the humanly devised constraints that structure political, economic, and social interactions. They consist of both informal constraints (sanctions, taboos, customs traditions and codes of conduct), and formal rules (constitutions, laws, property rights).*" (North, 1991: p. 97)

There are a range of definitions for technological capabilities; however, they all attempt to capture the systemic and creative nature of innovation (Clark, 2000; Hall, 2005). In defining technological capabilities, Bell and Pavitt (1993) are keen to differentiate how they differ from production capacities:

"*We draw a distinction between two stocks of resources:* ***production capacity*** *and* ***technological capabilities****. The former incorporates the resources used to produce industrial goods at given levels of efficiency and given input combinations: equipment (capital embodied technology), labour skills, (operating and managerial know-how and experience), product and input specifications, and the organisational methods and systems used. Technological capabilities (on the other had) incorporate the resources needed to generate and manage technical change, including skills, knowledge and experience, and institutional structures and linkages. We emphasise the distinction between the two because we are*

primarily interested in the dynamics of industrialisation, and hence in the resources necessary to generate and manage that dynamism" (Bell and Pavitt, 1993, p.32).

In defining technological capabilities in this way it is clear that the building of technological capabilities cannot be undertaken without taking into account the contextual setting (Hall, 2005) and addressing the institutional environment. However it is also argued that innovation systems approach is that it is "a theory of everybody working with everybody on everything ... is it sufficiently policy relevant to be operationalised in science, technology and innovation planning?" (Hall, 2005, p. 626).

Others have tried to bound the nature of the problem by looking at the regional innovation system (Carlsson et al, 2002; Cooke et al, 1997; Rodriguez and Marti, 2006), Rodriguez and Marti (2006, p.44) present tools for promoting technological capability-building, helping regional economies to develop by:

1. Enabling an in-depth diagnosis of the region's actual knowledge driven competitiveness foundations through identifying the resources, competencies, traditions, behaviour patterns that affect a region's growth.
2. Helping define the possible vision, objectives and lines of action to embrace sustainable economic growth by identifying the model of excellence required by the region and the competencies, values and attitudes that must be promoted if this is to be achieved.
3. Developing awareness of a region's potential risks and opportunities i.e. understanding how a region deals with change.

The approach employs benchmarking and goes beyond the analysis of financial and economic data to consider a further set of tangible and intangible factors that include institutions and governance, the societal framework, social capital and technology. In doing so Rodriguez and Marti assume that benchmarking can make a significant contribution in analysing a region's technological capabilities and in helping to redistribute resources more effectively. However, they recognise that in a constantly shifting environment, benchmarking methods need to keep apace with the change. However, they suggest that such an evaluation system helps to prevent lock-in and path dependencies and stimulates change.

Conclusions

Although approaches to capability building have tended to focus on either organisational capabilities or technological capabilities there are similarities and overlaps with capacity building. Both accept the importance of an organisation's internal and external environment in shaping its activities and also the need to adopt a systems approach to understand the implications of an individual's/organisation's actions.

In summary, the approach that an organisation may pursue is strongly determined by the knowledge inherent to that particular organisation. This knowledge may be tacit or cognitive, but is specific to that organisation, having been built up over the years. However, the organisation constantly needs to adapt to changes within its external environment such as technological developments, change in political regime and new regulations. In some cases, the organisation may not possess the knowledge and expertise that will enable it to undertake the requisite changes and so must find a means of obtaining them. Here, the system plays an important role in supplying this knowledge and information as do the relationships that the organisation has built up over time.

Research and studies into capacity have grown over the past thirty years, particularly in the area of capacity building. The study draw on many different sectors and disciplines, but although there is clear interest in procurement capacity and capability building this is not currently reflected in the academic literature, despite increasing information appearing in the grey literature.

Having undertaken a systematic review of the literature, there are be some recurrent themes that are common to many of the studies. According to current knowledge, the following factors should be considered when developing capacity and capability programmes:

1. The nature of the problem
2. Main actors
3. Resource issues
4. Key Issues e.g. political, cultural, social, economic, information
5. Future issues
6. Any other issues

We accept that studies that focus simply on the first five points may bound their findings, excluding any factors that do not fall into the defined categories. Consequently, in undertaking research into capacity and capability we have added the sixth point – "Any other issues" to enable any findings that do not fall in this remit to be included as any unexpected finding may still have serious implications for the planning and design of any future capacity and capability initiatives.

We shall use these six points as our framework for analysis at the 3rd International Research Study on Public Procurement (IRSPP) to enable comparison across cases and to support the identification of the key challenges in capacity and capability building. We also aim to examine the ways in which procurement capacities and capabilities can be improved and employed to support effective policy-making. The results of the study aim to help participants plan and implement effective procurement capacity and capability initiatives.

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