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Knowledge mobilisation in healthcare organisations: Synthesising evidence and theory using perspectives of organisational form, resource based view of the firm and critical theory

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Glossary of terms/abbreviations

ABS	Association of Business Schools
	Ambidexterity – organisations that are capable of pursuing exploitation of existing knowledge and exploration of new knowledge simultaneously are likely to do better than organisations that focus on only one or the other
AC	Absorptive Capacity - an organisation's capacity to absorb new knowledge, based on past learning
AT	Activity Theory
CAS	Clinical Assessment System
CME	Critical Management Education
CoP	Community of Practice- a group of people with common practical aims that learns through doing, making it hard to transfer knowledge outside the community
CP	Critical Perspective
DC	Dynamic Capabilities – an organisation can systematically solve problems by changing its resource base in response to external opportunities and threats; this is a development of the resource based view, introducing external feedback
DIKW	Data, Information, Knowledge and Wisdom
DRG	Diagnosis-Related Group
EBM	Evidence Based Medicine
EBP	Evidence Based Practice
EKA	External Knowledge Application
EKT	External Knowledge Transfer
GE	General Electric
FT	Foundation Trust
GM	General Motors
GP	General Practitioner
HRG	Healthcare Resource Group
HRM	Human Resource Management
HS&DR	Health Service and Delivery Research
IC	Intellectual Capital
ICT	Information and Communication Technology
IO	Industrial Organisation
IS/IT	Information Systems/Information Technology
JV	Joint Venture
KBT	Knowledge Based Theory
KIF	Knowledge Intensive Firm
KM	Knowledge Management
KMS	Knowledge Management System
KRE	Knowledge, Research and Evidence
KT	Knowledge Translation, Knowledge Transfer
MDT	Multi-Disciplinary Team

MIS	Management Information System
MNE	Multinational Enterprise
NHO	Non-Hierarchical Organisation
NHS	National Health Service
NPM	New Public Management
OD	Organisational Development
OF	Organisational Form
OT	Opportunities and Threats
PDSA	Plan, Do, Study, Act
PSF	Professional Service Firm
PI	Principal Investigator
RBT	Resource-Based Theory – a generic term for theory that has grown out of RBV
RBV	Resource Based View – an organisation is the sum of its tangible and intangible resources, including knowledge. Strategic resources' with specific features (see VRIO) can give the firm a sustainable competitive advantage
RRT	Rapid Response Team
RU	Research Utilisation
SCA	Sustained Competitive Advantage
SCP	Structure-Conduct-Performance
SDO	Service Delivery and Organisation [Research Programme]
SNA	Social Network Analysis
SR	Scoping Review – SDO output by the same team in 2010 that underpins this report
STS	Science and Technology Studies
SW	Strengths and Weaknesses
SWOT	Strengths, Weaknesses, Opportunities and Threats – internal (SW) and external (OT) factors that affect organisational performance
TCE	Transaction Cost Economics
UKCRC	UK Clinical Research Collaboration
VRIN	Valuable, Rare, imperfect Imitability and Non-Substitutable – the qualities that strategic resources will have, according to RBV theory, to give a sustained competitive advantage
VRIO	Valuable, Rare, imperfect Imitability and Organisation – a recent improvement on 'VRIN'; the 'organisational' element points to the need for organisational capability to exploit resources

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Executive Summary

Background

The literature review builds on an earlier Scoping Review of the literature on knowledge mobilisation (Crilly et al, 2010; Ferlie at al, 2012a) which identified a gap in the healthcare literature and proposed work in three defined areas or domains. The first is Resource Based View of the Firm, a strategic management concept that examines how differences in capabilities, including knowledge, allow one firm to outperform another. There is no equivalent in healthcare. It states that strategic resources that are valuable, rare, difficult to imitate, and able to be exploited by organisational processes (VRIO principles), will give the firm a sustainable competitive advantage. The second is termed the Critical Perspective, concerned with power and authority in the workplace, which is alive to tensions between occupational groups such as doctors and managers. Two strands of particular interest are Foucauldian and neo-Marxist labour process critical theories. The third area is Organisational Form, which considers whether certain types of organisation, such as networks, are better than others at mobilising knowledge.

Aims

We set out three propositions, drawn from the Scoping Review (SR), to guide the enquiry:

> PROPOSITION 1: "The NHS needs to consider how knowledge and information can be used to improve productivity, innovation and performance. The Resource Based View of the firm has application in health."
>
> PROPOSITION 2: "The health sector should make greater use of critical perspectives – especially labour process and Foucauldian perspectives - in understanding the fate of knowledge management systems. The importance of power contests among occupational groups in health systems makes it appropriate to temper positivistic and purely technical approaches to knowledge management with scepticism."
>
> PROPOSITION 3: "NHS Boards should take a clear view on organisational design elements needed to support knowledge mobilisation. We suggest partnership and network-based organisational forms are more effective at knowledge sharing than markets or hierarchies. There is payoff in collaborating."

The three propositions are related to each other. RBV and the Critical Perspective are polarized, as the Resource Based View uses economic models of free market competition while the critical perspective uses sociology of the professions and cautions against importing private sector thinking. The two domains use differing views about human motivation and type of discourse (consensus/dissensus). Organisational Form is characterised as sitting between the two domains, acting as a bridge or a pragmatic hybrid of the two schools of thought.

Methods

We undertook a separate literature search to address each of the three propositions, carried out consecutively. For every domain we selected a string of search terms, based on a summary of the field, and applied them to an agreed set of high impact journals for the period 2008 – 2011, i.e. 56 journals for RBV, 20 for the critical perspective and 25 for organisational form. Each string was the outcome of several iterations. A structured process of sifting and analysis took place, reducing 5283 citations to focus on 167 full papers. A further prioritisation process took place to identify a sub-set of the papers most relevant to the propositions. The systematic journal search was supplemented by snowballing, book and author searches. The advantage of our methods is that we accessed high quality studies with strong theoretical underpinnings. However, they provided insufficient application to healthcare and managers. We remedied this by (a) undertaking a narrative search of healthcare evidence to map to the RBV domain and (b) applying a search of Knowledge, Research, Evidence terms (as used in the Scoping Review) to electronic databases of healthcare literature.

An internal Advisory Group and external group of Chief Executives received interim feedback and acted as a sounding board. These groups emphasized the importance of establishing relevance between abstract theory and the reality of healthcare delivery.

Results

Response to the propositions can be summarised as (1) Agree, (2) Agree, (3) Disagree.

The Resource Based View is relevant to healthcare. The status and validity of RBV theory in the literature has both supporters and detractors. The theory is difficult to operationalise and, at best, has gaps that need to be filled. Specifically, it raises questions of definition and measurement of (a) strategic resources, (b) value and (c) competitive advantage.

RBV is a static theory and has sparked dynamic developments that include (i) 'dynamic capabilities', introducing environmental feedback, (ii) 'absorptive capacity' modelling an organisation's capacity to absorb new knowledge and (iii) 'ambidexterity', which considers exploration and exploitation of knowledge. The literature review has generated a dynamic model that enables mapping between generic theory and healthcare.

The Critical Perspective highlights the importance of the professions in mobilising knowledge within healthcare. It supplies a theory of power and authority that is entirely absent from the functional and, ostensibly, value-free RBV. Critical papers suggest various possibilities of professional enrolment, reinterpretation, superficial compliance and overt resistance to developing Knowledge Management systems. The reaction of the professions to KMS is one major theme. Power relations and their impact on knowledge flows form a second major theme. A large number of Foucauldian papers and a smaller number of labour process papers emerged, e.g. analysing control regimes in UK health centre call centres.

The Organisational Form search shared cross-cutting themes with the other two domains, especially relating to absorptive capacity and ambidexterity. We had anticipated that Proposition no. 3 would have been affirmed since intuitively and theoretically we would expect that organisations based on trust rather than hierarchy would be better at mobilising knowledge. Importance of trust and relationships is indeed supported by the literature. The role of organisational design, however, emerges as much less important. Hierarchies or relational markets based on high trust are more effective at sharing knowledge than networks or collaboratives where trust and relationship quality is poor. Rather than focusing on organisational design, the review suggests that Boards would be better-advised to focus on fostering strong relationships of trust and psychological safety in the workplace.

The 'Knowledge Research Evidence' search of healthcare literature is mapped to the three domains above. Research evidence is the main type of knowledge which has value, and the literature is exercised about how research evidence can best be put into practice. This contrasts with knowledge in the three proposition-domains, which is an intrinsic capability or resource rather than an external product.

We use a bicycle metaphor to capture the relationship between the domains where RBV, CP and OF are components of the machine and KRE is a signpost. The external environment is the terrain. RBV suggests that the machine and its capabilities are more important than the environment in giving a competitive edge.

Conclusions – The Theory

The dynamic model generated by the literature represents an exercise in theory-building that links organisational processes and resources with antecedents and consequences, e.g. performance and competitive advantage. Strategic management goals are modified by feedback from the external environment. A research agenda has emerged in response to the propositions. It involves (a) addressing the weaknesses and gaps in the literature, (b) operationalising measures using healthcare as a concrete example, (c) identifying growing areas of enquiry.

Research questions include:

- Which strategic management perspectives are most useful to senior NHS managers?
- How can 'value' be defined and operationalised (empirically measured)?
- What are the implications of using different measures of value?
- To what extent can 'sustained competitive advantage' be conceptualised and operationalised within the healthcare sector?
- What are 'strategic resources' within health service organisations?
- How can the concepts of exploration and exploitation be applied to the healthcare sector?
- Do organisations benefit by focusing on either exploration or exploitation, or does an organisation need to engage in both activities?

Questions for reflective practitioners include:

- Which resources and capabilities distinguish your organisation from others? How would you apply the RBV perspective in your organisation?
- What models of strategic management are most useful?
- Are the organisation's policies and procedures organised to support the exploitation of its valuable, rare, and costly to imitate resources, including clinically and managerially relevant forms of knowledge?
- Where does organisational slack exist and how can it be used to promote innovation and growth?
- Are the concepts surfaced here of 'absorptive capacity' and 'organisational ambidexterity' meaningful and helpful in the field?
- How are healthcare professionals engaged with knowledge mobilisation efforts in your organisation? Are there sources of resistance or adaptation?
- Does knowledge flow smoothly through well developed relationships in your organisation?
- Do the concepts of a 'relational market' or 'relational hierarchy' surfaced here make any sense in the field?

These questions could usefully be addressed through a follow-on empirical study of NHS and other UK healthcare agencies, by undertaking analyses of published documents using VRIO and associated frameworks.

Conclusions – The Relevance

The HS&DR Programme funds research (evidence synthesis and primary research) to improve the quality, effectiveness and accessibility of the NHS, targeted at an audience of the public, service users, clinicians and managers. The literature review presented in this study has an academic flavour because (a) it deals with theory and (b) it is largely drawn from academic publications that are targeted to an academic audience. Our challenge is to demonstrate its relevance and to translate the major findings to a practitioner audience. To do this we map our research to some key HS&DR aims in this section to address its relevance for managerial practice in the NHS.

HS&DR Aim: Address an issue of major strategic importance to the NHS

Our findings are relevant to the current debate about service configuration. The review compares two different theories – the Resource Based View which focuses on an organisation's internal strengths, and Porter's theory which focuses on industry features. They both point towards the same conclusion, namely that competition and search for competitive advantage will lead to specialisation and to consolidation. Larger centres of excellence will flourish and smaller generalised services will struggle, according to these theories.

There are implications here for policy makers. Unlike Porter (Porter & Teisberg, 2006), who rejects the idea of 'lifting all boats', we are not proposing specialisation and consolidation as a goal. Instead, we are highlighting the strategic impact of competition.

HS&DR Aim: Fill a clear 'evidence gap', and generate new knowledge of direct relevance to the NHS

This HS&DR aim reflects the brief of our project. We identify the Resource Based View of the firm as a strategic management theory that has been researched for 20 years in generic management literature but has not crossed over into health. The study highlights the lack of strategic management theory bespoke for the NHS, and the drawback of importing private-sector concepts wholesale and uncritically into the public sector.

The review finds evidence that supports the following:

- **Organisational slack** - organisations which are rich in resources will have more headroom to innovate, grow and perform. RBV highlights availability of organisational slack as a strategic objective that is in the interests of the organisation. This poses a challenge to the productivity or 'more for less' efficiency agenda operating in the current fiscal climate.

- **Knowledge mobilisation -** important learning factors, resonating with organisational slack, are culture (consistency for doctors and empowerment for nurses) and informal breaks (for both doctors and nurses).

- **Open and closed systems** – We can reconcile the different strategic objectives of providers and commissioners within the economic view of open and closed systems (effectively micro and macro levels). Providers can grow and increase revenue share, operating in an open system, but commissioners work within a closed system or fixed budget.

- **Relationships trump organisational design** - networks may be effective, but a hierarchy/market that exploits good relationships is better at knowledge sharing than a network that harbours poor relationships. Connective ability of individuals is more important than organisational structure when it comes to making organisations effective.

- **Safety trumps finance** - organisations that get diverted by resource arguments at the expense of safety and quality will ultimately fail. This is consistent with RBV, especially if 'value' is defined as unit cost of outcome (rather than input).

- **Knowledge-based organisations** need to be cautious about breaking up tasks into too many discrete subtasks, e.g. exposure to new information may need 'front-loading' by senior clinicians (for example, in an Emergency Department). Our review considered evidence that developing a pyramidal structure and codifying professional tacit know-how may jeopardise quality. It challenges the trend over some years to delegate and cascade discrete components of work to lower grades.

- **VRIO Resources** – the Resource Based View encourages managers to identify strategic resources that are valuable, rare, difficult to imitate, and to foster organisational policies that exploit these resources. Our thumbnail sketch based on Foundation Trust Forward Plans suggests that this is a novel approach which goes beyond a conventional SWOT analysis.

- **Organisation-specific factors** outweigh market conditions, accounting for 22% of variation in performance premium according to some studies (Crook et al, 2008).

- **Managers matter -** leadership, creation of a consistent and psychologically safe culture, capitalising on strengths, allied with the internal resource base, allow one organisation to outperform another, even over the same rough terrain.