

Investigation of current perspectives for NHS Wales sustainable development through procurement policies

Christos I. Papanagnou & Natalia Shchhaveleva

To cite this article: Christos I. Papanagnou & Natalia Shchhaveleva (2018) Investigation of current perspectives for NHS Wales sustainable development through procurement policies, Public Money & Management, 38:7, 493-502, DOI: [10.1080/09540962.2018.1527535](https://doi.org/10.1080/09540962.2018.1527535)

To link to this article: <https://doi.org/10.1080/09540962.2018.1527535>



Published online: 08 Oct 2018.



Submit your article to this journal [↗](#)



View Crossmark data [↗](#)

Investigation of current perspectives for NHS Wales sustainable development through procurement policies

Christos I. Papanagnou and Natalia Shchaveleva

Public sector procurement has to operate under the pressure of policies and strict budgets. This paper examines the current perspectives of the NHS Wales Shared Services Partnership (NWSSP) on sustainable procurement policies. In particular, it investigates the adoption levels of the sustainable procurement policies of buyers (NHS Wales), examines the level of engagement of small- and medium-sized enterprises (SMEs) with NHS Wales, and explores the support for the existing sustainable procurement function through order processing analysis of catalogue coverage.

Keywords: Catalogue coverage; NHS Wales; procurement policies; SME engagement; sustainability.

In light of environmental degradation, resource depletion, and persistent global poverty, supply mechanisms are increasingly being called upon to contribute to the broader organizational goals of sustainable development through the inclusion of social, financial and environmental criteria within the procurement processes, widely known as the triple bottom line (TBL) framework (Srivastava, 2007). Emmett and Crocker (2008) introduced the '5Rs' as a procurement function within organizations, securing supplies, materials, and services of the right quality, in the right quantity, at the right time, from the right place (source), and at the right cost. However, several management studies have highlighted the need for procurement to go beyond this basic objective (Erridge and Hennigan, 2012; Walker, 2015). The role of the procurement function has rapidly changed from one of clerical operation to strategic partnerships, which may be involved in decision-making regarding budget expenditure (Davison and Sebastian, 2011).

It is less than a decade ago that the UK government decided to promote sustainable policies in public sector organizations (Tudor *et al.*, 2015). In 2013, the Welsh Government beat tough competition to win a prestigious award for bringing public procurement to the forefront of sustainable transformation. Public sector procurement includes the acquisition of a wide range of goods and services from third

parties which support the public services (NWSSP, 2015). In 2013–2014, the expenditure on goods and services (influenceable spend excluding commissioned services) by NHS Wales was £800 million, while the NHS Wales Shared Services Partnership (NWSSP) processed more than 1,000 contracts of an approximate total value of £500 million (Public Policy Institute for Wales, 2016). Public sector procurement policies go through the stages of identification of need, selection of suppliers, and post-contract award management, which includes disposal. The three main factors that influence public sector procurement are: legislation frameworks; restricted budget with no possibility for adjustment to meet any additional needs; and a non-profit orientation of business operation (McCue and Pitzer, 2005).

Despite the UK government's initiatives to attain a high degree of sustainable procurement practices within public sector organizations, most tend to neglect green procurement considerations when making sustainable procurement decisions at the organizational level (Grose *et al.*, 2012). Although public procurement is widely regarded as one of the most effective mechanisms available to governments in advancing public policies (such as the low carbon agenda), public procurers have to operate under the pressure of policies and strict budgets, while simultaneously trying to find the golden ratio between the minimum

Christos I. Papanagnou is a Lecturer in Logistics and Supply Chain Management at Salford Business School, University of Salford, UK.

Natalia Shchaveleva is a postgraduate student at Salford Business School, University of Salford, UK.

expenditure of taxpayers' money and obtaining the best value for money (Correia *et al.*, 2013). Healthcare organizations, such as NHS hospitals, have a high degree of autonomy, which can become a hindrance to adopting sustainable procurement policies (Walker and Brammer, 2012). Hospital purchasing administrators, however, generally consider the adoption of sustainable procurement policies to be a priority. Their argument is that the shift towards more sustainable purchasing operations describes the efforts made by hospitals to include environmental, economic and social dimensions in their arrangements with suppliers (Walker *et al.*, 2008). In addition, the consequences of the NHS's resistance to change is that, in some areas, the ratification of sustainable procurement may be prevented (Cox *et al.*, 2005). Finally, as a result of various other reasons (for example restricted budgets, limitations in suppliers choice, frequent changes at the managerial level), healthcare organizations are somewhat vacillating in their implementation of sustainable procurement policies (Walker and Preuss, 2008; Tudor *et al.*, 2015).

In terms of social impact, reinvesting in the local economy by supplying locally brings enormous benefits to a community; this is one of the key factors of sustainable procurement. The vast majority of products and services in the UK are provided by small- and medium-sized enterprises (SMEs). SMEs encounter numerous difficulties due to the complex nature of the goods and services they produce, as well as in service delivery. For this reason, the NHS is not a large buyer of these products. Although there are still certain categories which are accessible to SMEs, there is a common belief that not being able to meet the capacity is the main obstacle for these types of businesses to become actively involved in the public sector (Munoz, 2009). Moffett and Walker (2015) state that many SMEs have the expertise required to sell to the public sector, but even the most dynamic SMEs can find it difficult to communicate their star qualities within the constraints of public sector procurement.

One of the most important challenges in the past few years for the NHS has been to bring benefits to the community, as well as becoming a socially-responsible organization by opening its doors to SMEs and local suppliers. Loader (2011) conducted research on how local authority procurement practices affect their ability to successfully procure from SMEs and suggested that SMEs can find it extremely hard to maintain long-lasting contracts with

the public sector as a result of unplanned price changes that larger companies can more easily handle. In addition, the tendering process can be very expensive for them.

A series of initiatives has addressed these problems, including the announcement to have spent 25% on SMEs by the end of the 2015 parliamentary year (Cabinet Office, 2015). In the context of government decentralization, Wales has piloted a study on how to maximize procurement from SMEs within EC legislation (Thomson and Jackson, 2007). Inspired by this government initiative, NHS Wales is particularly interested in engaging SMEs and Welsh companies with a special interest in minority and women-owned businesses (MWOB) (Walker and Brammer, 2012).

NHS Wales aims to provide equal opportunities to local producers, while building stronger communities and reducing social exclusion and poverty (Lindgreen *et al.*, 2009). Preuss (2009) studied a county council in the north of England by examining the economic effects of contracting with local suppliers. It was found that local suppliers re-spent a mean of 76% of contract income within the region, whereas the corresponding average income of non-local suppliers was less than half at 36%. This shows that local company engagement not only creates social advantage, but also provides additional economic benefits for the region as income is reinvested locally.

From a financial point of view, procurement efficacy is frequently based on quantifying non-cash releasing benefits, including cost avoidance and value-added practices. In the NHS, these practices are often associated with reviewing and benchmarking contracts—to achieve better value for money—and the standardization of items that are used within health boards (Department of Health, 2016). However, a practice that seems to have minimal appeal is the catalogue coverage for items ordered by health boards in order to reduce the lead times. (Catalogues are online databases that enable NHS trusts to order goods electronically and personalize their shopping experience.) Through the reduction of non-catalogue requests, increased catalogue coverage helps healthcare organizations achieve the optimum level of item coverage, resulting in more effective management of the procurement function, as well as in the production of timely and robust management information (Powys Teaching Health Board, 2016).

In the public sector, it is of the utmost importance to ensure that all key categories of expenditure have an appropriate sourcing

strategy that stakeholders agree with (Thai, 2008). This strategy, however, is often subject to the supplier compliance level, which is quantified by both contract and catalogue coverage. An efficient electronic catalogue system maximizes coverage and delivers improved compliance. Furthermore, catalogue management can regularly be used for key areas of expenditure. This is the core driver of procurement strategy within public healthcare organizations because delivery reduces risk and maximizes savings opportunities. More specifically, well-established catalogue coverage, supported by effective, automated processes, enables the tracking of everything that is purchased, from the point of demand to its use at the agreed pricing, and electronic invoice matching and payment (Van Raaij *et al.*, 2007; Department of Health, 2016). Catalogue coverage is usually expressed in percentages. The Central Manchester University Hospitals NHS Foundation Trust (CMFT), for example, has over 95% of all expenditure on purchase order, while there is a strategy in place for products and services to be included on the catalogue in order to increase coverage to 80% of the addressable transaction volume (CMFT, 2016). In fact, a well-developed catalogue system with catalogue coverage of 80% or more of the addressable transaction volumes covers almost all regularly-used supplies across an NHS organization (Department of Health, 2016).

The main objective of this paper is to contribute in minimizing the gap in knowledge concerning sustainable procurement. Our study aimed to:

- Investigate the readiness and adoption levels of the sustainable procurement practices of buyers (NHS Wales) across environmental, social, and economic dimensions.
- Review the social dimension by examining the level of engagement of suppliers (local SMEs) to NHS Wales.
- Explore the economic dimension through order processing analysis of catalogue coverage and usage in order to ascertain the level of support for the existing sustainable procurement function.

We examined the NWSSP, which provides a range of high-quality, customer-focused, professional, technical and administrative functions and services to local health boards (LHBs) and NHS trusts in Wales. Two separate surveys were conducted—one with the buyers, and the other with SME owners and employees. In addition, an order processing analysis of catalogue coverage and usage was carried out of all NHS Wales trusts.

Case study: NWSSP

NWSSP delivers significant savings and benefits, both qualitative and financial to the NHS. The procurement services are comprised of four business divisions:

- Sourcing (contracting).
- Supply chain (logistics and warehousing).
- Frontline purchasing (locally-based procurement teams).
- Accounts payable (invoice payment).

Each of these divisions aims to provide an end-to-end procurement service to LHBs and trusts across Wales, as well as supporting the Welsh government in the implementation of a number of strategies, including supporting SMEs, sustainability, prudent healthcare and collaboration. Both the Welsh government and NHS Wales have their objectives met through procurement services, in general, and Prudent Healthcare in particular, whose principles of service delivery are based on ensuring that quality is at its optimum and interventions are clinically cost-effective. The aim of the procurement team is to ensure that the procurement process enhances the quality of outcomes while lowering costs, by working with suppliers to stimulate innovation and improve engagement with the stakeholders.

The sourcing business division comprises of four category teams which undertake collaborative procurement activity on behalf of the NHS trusts and LHBs across Wales. The teams cover the sourcing work, which ranges from pharmaceuticals, utilities and medical consumables to food. The current procurement policy status can be regarded as transitional. In 2006, the procurement function of each hospital was taken and integrated into a single procurement centre. Shared service partnerships were created in order to make all the administrative functions of all the hospitals in Wales more resilient, effective and collaborative. This restructuring also enabled standardization of items ordered from various health boards and trusts, as well as encouraging different hospitals to use the same items, which helps to attain much bigger orders that lead to significant price reductions. In addition, the ability to monitor the needs and demand for the sum of hospitals, rather than each one separately, reduces the risk of making unnecessary purchases, thus saving on their associated costs. Figure 1 shows the procurement process before and after restructuring.

A sourcing team is now renewing and

renegotiating the set of contracts and making them applicable to all NHS Wales trusts. The purpose is not just to reduce costs but also to provide better quality products and services. In addition, the consolidation of the warehouses will provide better stock control. One further advantage of centralized procurement for NHS Wales, according to the four-part plan, is the achievement of economies of scale through centralized procurement and greater aggregation (NHS Supply Chain, 2013). This will provide the ability to craft the common aims, mission, and strategies for future development, which includes the implementation of sustainability policies of procurement processes. Note that centralized procurement may lead to glitches due to the physical distance between the local procurer and the central unit (Hayes, 2010). The NHS as a whole faces great challenges in terms of time response, co-ordination, and communication. However, due to the relatively small size of Wales, these issues can be easily alleviated by ensuring that local markets remain competitive and no monopolies emerge (Cresswell and Sheikh, 2015).

Sustainability policies within NWSSP

Sustainability in the NWSSP is currently subject to European Union (EU) public procurement directives and norms (European Commission,

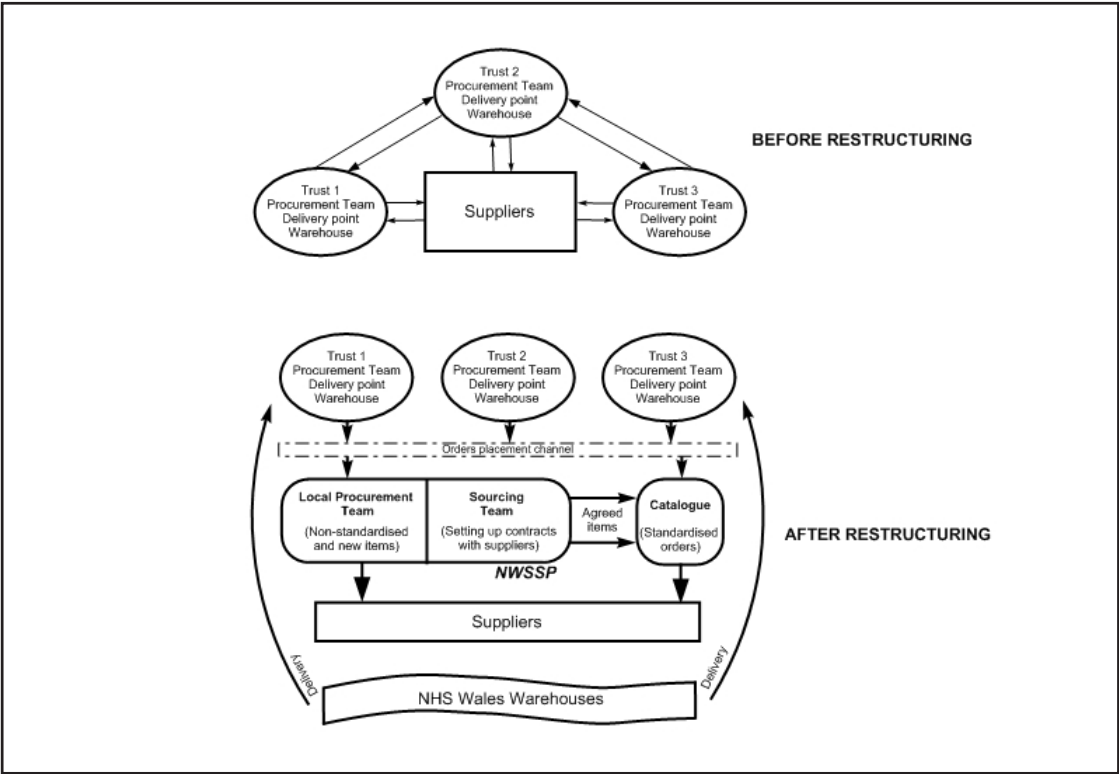
2003). The following sustainability policies are currently implemented within NWSSP: packaging policy; transport policy; NWSSP procurement policy; NWSSP supplier policy; and corporate social responsibility policy.

There are also 12 sustainability key objectives (NWSSP, 2015). Table 1 shows the relevance of these 12 objectives with our three study aims: readiness level of NWSSP personnel, engagement level of SMEs, and order processing through catalogue coverage.

Methodology

The sample for the first survey consisted of 38 employees who completed a questionnaire at their place of work and during work hours, which is why there was a 100% response to the survey. The respondents were placed into three groups: 14 were in the non-clinical group who were people in procurement and management and made up (36.8%) of the overall sample; 16 (42.1%) were in the clinical group (nursing staff); and eight (21.1%) were in the medical group (doctors). The questionnaire consisted of seven items, which respondents had to rate on a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree. Seven statements were selected: (1) Use of life-cycle analysis for recycling/re-use. (2) Suppliers' locations are operated in a safe manner. (3) Asking suppliers to commit to waste reductions.

Figure 1. Procurement process in NWSSP before and after restructuring.



(4) Purchasing from MWOBs (Carter and Jennings, 2004). (5) Purchasing from small suppliers. (6) Purchasing from local suppliers (Walker and Brammer, 2012). (7) Working with third sector organizations (Feeley and O'Mally, 2015). The first survey investigated the study question: *How do procurers within NWSSP evaluate the level of implementation of sustainable practices according to the triple bottom line?*

This question was prompted by the fact that the NWSSP uses two main tools to drive and improve sustainable procurement performance: the Sustainable Procurement Assessment Framework (SPAF), and the Sustainable Risk Assessment Template (SRA). In addition, NWSSP recently introduced a template where products need to be certified as ethically sourced, such as those certified by a member of Fairtrade Labelling Organizations International or equivalent (Bloomfield, 2015). Given the complexity of procurement function in NHS Wales, this question sought answers about the extent to which the management system and procurers integrated key environmental, social and economic aspects to support sustainable practices.

The second survey was conducted on participants who were employed by SMEs contracted to NWSSP. The aim of this survey was to identify the barriers and obstacles for SMEs in selling goods and services to NHS Wales. The following four obstacles were chosen as items following discussions in the format of informal interviews with SME representatives: time, complexity, experience and capacity. The sample for the second survey comprised 162 respondents from 94 SMEs involved in: construction (16%), transportation (11%), catering (11%), medical (10%), IT (10%), and consulting (9%). Seven per cent were active in a variety of areas, such as agricultural, low-skill manufacturers, and reprographics, finally 26% were 'new starters'. Respondents completed a three-item questionnaire (first ranking; the other two dichotomous answers with yes/no). The second survey investigated the study question: *How strong is NHS Wales engagement with SMEs and local suppliers, in terms of engagement in procurement processes?* This question was prompted by the fact that in the UK, since 2013, SMEs have accounted for 99.9% of the 4.9 million private sector businesses and 48.1% of private sector turnover (Shaw, 2011).

Finally, data on 53,000 all-Wales trust orders processed to sellers for the period of January–March 2015 were collected and analysed. The two types of orders analysed

were: orders for standardized items that belong to the catalogue (the items, included in NWSSP database, which are forwarded to relevant suppliers); and orders for non-standardized items, placed by buyers and processed manually. The study question examined was: *How NWSSP order processing is facilitated by catalogue coverage?* This question was prompted by the fact NWSSP and NHS Wales aim to provide a world-class service to their patients and because procurement process in NWSSP has just recently gone through restructuring. Prompt services to patients could be classed as a component of the sustainability of healthcare organizations, since disrupted operations affect the community (Customer Board Members, 2012). However, contract and catalogue coverage of items is one of the biggest concerns within NWSSP (Hywel Dda University Health Board, 2016; Powys Teaching Health Board, 2016).

Findings

The level of awareness of sustainable policies within NWSSP

According to Preuss (2009), it is only recently that sustainable public procurement policies have been studied. Sustainability is a high-priority issue not just for NHS Wales but for many health organizations (Elkington, 2002). Table 2 presents the findings of the first survey. The findings show that all three groups of respondents, i.e. non-clinical, clinical, and medical, had a similar level of awareness in sustainable practices. The highest mean was *asking suppliers to commit to waste reductions* with 3.25, while *uses life-cycle analysis for recycling/re-use* was at 2.90. More specifically, the clinical group had the highest percentage at 3.75,

Table 1. Sustainability key policies and their relevance.

<i>Sustainability key objectives</i>	<i>Relevance</i>
Ensure procurement activities are conducted in an ethical manner	SPP
Promote equality and diversity in its activities	SMEE, SPP
Support the <i>Securing the Future</i> document	SPP
Better engagement with stakeholders	CCU, SPP
Working with the third sector organizations	CCU, SSP
Develop organizational values and integrate CSR principles into practice	SSP
Measure performance on sustainability	SSP, CCU
Implement the Opening Doors charter	SMEE, CCU
Reduce contribution to climate change	SSP, CCU
Reduce, reuse and recycle packaging	CCU, SSP
Minimize waste	SSP
Minimize the negative impact of transport	SSP

*SPP: Sustainable procurement practices. **SMEE: SME engagement. ***CCU: catalogue coverage usage

while the other two groups had 3 each. These two items are both related to the environmental dimension.

As regards the social dimension, all three groups of public procurers in NHS Wales seem to have the least awareness for *purchases from MWOB* (mean 1.00), while the statements about *purchases from small suppliers and local suppliers* also received low scores, 2.15 and 2.10, respectively. More specifically, for small suppliers, the medical group was the highest at 2.75, followed by the non-clinical group at 2.1 and the clinical group at 1.6. In contrast, the non-clinical group had the highest score (2.3) for local suppliers, with the other two groups both at 2. So NWSSP employees considered the environmental dimension as the strongest and the social dimension across TBL as the weakest—an outcome that is in line with Lindgreen *et al.* (2009), who found that most of the laws and regulations associated with environmental sustainability are mandatory, whereas most of the policies implemented towards social sustainability are voluntary or optional.

Concerning the economic dimension, *supplier's locations in a safe manner* with a mean of 2.78, it can be seen that the non-clinical group gave it the highest score (3.6), with the medical and clinical groups giving 2.5 and 2.25, respectively. Finally, the mean score for *works with third sector organizations*, which relates to charities, was the second highest at 2.93. In terms of the individual groups, it follows the same pattern as above with the non-clinical giving the highest score followed by the medical and clinical at 3.4, 3, and 2.4, respectively. Both these findings indicate that, while the non-clinical group considered the economic factor to have the highest importance, the clinical group considered it the least important. It should be noted here that, although *works with third sector organizations* could also be included in the social dimension, we chose to include it

in the economic one as it produces savings for the procurers (Feeley and O'Mally, 2015).

Another section of the questionnaire included the situational question: *If you had to make a decision between a supplier who offered cheaper products while having standard environmental certificates or a supplier offering a more expensive product but having additional environmental certificates and who implemented more approved ethical standards in the company, which one would you choose?* The finding for this was that 28 out of the 38 respondents (74%) stated that they would choose the first supplier, which suggests that the majority of buyers would most likely put the best price of products or services before additional sustainability assets. Another question concerned *attendance on training courses on sustainability*. The findings showed that 81.6% of the procurers had never attended any training on sustainable procurement.

Level of SME engagement in sustainable procurement

Table 3 presents the results of the second survey, which was anonymous, and which examined the level of SME engagement in sustainable procurement. It should be noted that 26% of the SMEs were fresh starters who both fostered green thinking and were more co-operative with sustainable procurement policies. In view of the fact that these SMEs had little business experience at the time the survey was conducted, they wanted to explore further procurement opportunities by contracting with the public sector.

First, SME employees were asked to rank what they considered to be the most serious obstacles to adopting sustainable procurement practices. The biggest obstacle was time factor with a mean of 44.40%. This was followed by capacity (mean 25.08%), complexity (mean 20.84%) and, finally, experience (mean 9.68%). Thus, there was an indication that procurement practices within NWSSP significantly affect the

Table 2. Level of awareness of public procurers.

Statement	Non-clinical group	Clinical group	Medical group	SD	Average score
Number of respondents (percentage)	14 (36.8%)	16 (42.1%)	8 (21.1%)		
Uses life-cycle analysis for recycling/re-use	2.7	3.25	2.75	0.30	2.90
Supplier's locations in a safe manner	3.6	2.25	2.5	0.72	2.78
Works with third sector organizations	3.4	2.4	3.0	0.50	2.93
Ask suppliers to commit to waste reductions	3	3.75	3.0	0.43	3.25
Purchases from small suppliers	2.1	1.6	2.75	0.58	2.15
Purchases from local suppliers	2.3	2.0	2.0	0.17	2.10
Purchases from MWOB	1.0	1.0	1.0	0.00	1.00

1 = strongly disagree; 5 = strongly agree.

ability to successfully procure from SMEs due to time constraints, especially for SMEs trading in the construction (55.40%) and medical (51.10%) sectors. This is in agreement with Hong and Kwon (2012) who found that public procurement policies, especially for long-term contracts, negatively affected collaboration between SMEs and public organizations. Possible reasons could be the lack of flexibility, unforeseen price changes, and the high costs involved in becoming part of the tendering process in the UK health sector. The survey also revealed that capacity was the second most important obstacle and, in particular, SMEs offering catering services said this was the most dominant obstacle (35.60%) followed by consulting companies (26.00%). Although many businesses have the expertise to compete, even the most dynamic of SMEs could find it difficult to completely satisfy the requirements of sustainable procurement in the public sector in order to provide top quality products and services (Loader, 2011). Regarding business starters, they find lack of experience (40.10%) as the most important obstacle in joining NHS Wales procurement practices, which was also observed by (Flynn and Davis, 2015). In fact, the lack of engagement of SMEs in providing procurement services due to the four obstacles compromises the sustainability of procurement practices within the public sector.

The second item in the survey explored the level of SME awareness in supplying to NHS Wales. The high level of awareness found (62%) tends to support the fact that UK health organizations have put effort into boosting collaboration between government procurement services and local SMEs. Inspired by this government initiative, NHS Wales is interested in SME engagement, while NWSSP, in particular, expressed an interest in collecting primary data from SMEs about their level of understanding regarding opportunities to

supply to Welsh hospitals.

The third item in the survey examined the level of joint-forces for bidding purposes, which was shown to be significantly low (23.02%). This outcome could be mainly due to bidding schemes that might not suit the nature of many SMEs, while lack of trust is a hindrance to dividing both responsibilities and profits amongst the different companies. Furthermore, joint bidding is a relatively new opportunity for SMEs to participate in public contracts. Establishing joint ventures and building consortia could, in the future, be the main way for SMEs to participate in tenders, and is currently being highly promoted by NHS Wales. In April 2013, a consortium consisting of eight SMEs won a bid to provide mental health services (Parabl, 2016).

The study findings suggest that it is difficult for SMEs to take part in public healthcare tenders because, in most cases, it is not in their best interests to place an offer. In addition, it is difficult to maintain long-lasting contracts with public sector procurement. Bidding was mainly for commissioning and food. 'Commissioning' was mainly for mental health and home-care services, which are mostly provided by third sector organizations that partially fulfil NWSSP plans in the implementation of corporate social responsibility policies. Food attracts many Welsh companies due to the fact that Wales has a strong agricultural industry. Additionally, the Welsh government supports the Welsh Procurement Initiative by encouraging public organizations to be supplied locally (NWSSP, 2015).

In 2003, the Welsh Procurement Initiative launched an SME Development Pathfinder project to primarily form a food group of catering and procurement managers in the public sector, whose aim was to identify local SMEs to become active in the food industry for 'in-house collaboration on food procurement

Table 3. Level of SME engagement with the NHS.

Sector	Percentage	Obstacles to sustainable procurement (%)				Awareness of supplying (%)		Joint bidders (%)	
		Time	Complexity	Capacity	Experience	Yes	No	Yes	No
Business starters	26%	20.70	16.80	22.40	40.10	60.60	39.40	25.10	74.90
Construction	16%	55.40	26.30	16.70	1.60	71.20	28.80	13.30	86.70
Transportation	11%	46.80	27.30	24.70	1.20	55.90	44.10	23.30	76.70
Catering	11%	47.10	15.30	35.60	2.00	60.10	39.90	27.80	72.20
Medical	10%	51.10	16.90	24.70	7.30	59.20	40.80	18.80	81.20
IT	10%	48.80	20.30	25.60	5.30	60.30	39.70	25.30	74.70
Consulting	9%	40.10	24.20	26.00	9.70	66.70	33.30	24.40	75.60
Other	7%	45.20	19.60	24.90	10.30	62.00	38.00	26.20	73.80
Averages		44.40	20.84	25.08	9.68	62.00	38.00	23.02	76.98

including hospitals'. Although the project demonstrated that food quality was considerably improved when supplied locally, there were hurdles that needed to be overcome. For a long time, the NHS's main focus was to reduce costs, which resulted in lower budgets for ingredients, fewer skilled professionals, as well as less catering equipment and a weaker catering infrastructure. This caused fragmentation in demand, where smaller amounts had to be delivered to over 5,000 outlets within short delivery windows (Tudor *et al.*, 2015).

Catalogue coverage and order processing

A significant reason for analysing the relationship between order processing and catalogue coverage was to examine the effects of the NWSSP procurement process restructuring. In our study, the number of all-Wales trust orders processed to the external sellers, for example local SMEs, for the period of January–March 2015 was analysed. The findings showed that from a total of 53,000 items, 9,143 were orders that should have been placed through a catalogue (and perhaps, to be even more up to date, through an e-catalogue). In addition, considerable lead times resulted from serious delays and unnecessary steps in order processing. The lack of essential information supplied in catalogues about a product or service, along with the barriers in order processing and distribution were found to contribute negatively to the sustainability of the procurement function, which is in line with Hayes (2010). An example of this is that, throughout the data collection and analysis of orders, we saw that there was a consistent delay in the delivery of medical gas, which could have critical consequences. Better order processing provides transparency throughout storage and distribution services across NHS Wales, which operate from three regional stores based in Bridgend, Denbigh, and Cwmbran, together with some smaller satellite/receipt and distribution stores (NWSSP, 2015). Thus, catalogue coverage can provide better control of cargo-vehicle routing, cargo-vehicle routing, as well as excessive stocks, which often results from insufficient utilization of catalogue coverage.

The examination of catalogue coverage involved sending notification letters to end-users, whose orders had been incorrectly placed revealing two main factors contributing to this:

- *Lack of training*—there are multiple ways to

place an order through a catalogue. Twelve of the participants stated that they were not aware of the procedures in response to the question regarding the different ways of using the Oracle-based catalogue.

- *Lack of personnel placing orders*—very often hospitals suffer from staff shortages with no administrative assistant available to process orders, making the whole process slow and much less efficient.

This finding is in agreement with the study by Hinrichs *et al.* (2014), who highlight the importance of better utilization of catalogue coverage in district health boards in New Zealand by providing training opportunities to personnel and generating savings through consistent order processing and systems. Thus, continuous improvement of catalogue coverage could provide several benefits: a substantial decrease in lead times; saving work time for the buyers and freeing them to concentrate on more important tasks; and improvements in service quality.

Discussion and conclusion

The current perspectives of NHS Wales sustainable procurement policies were examined through environmental, social and economic dimensions. NHS employees were found to perceive sustainability as an important factor affecting procurement policies. In addition, with regards to the environmental impact, the study results also showed that suppliers' (SMEs') commitment to waste reduction, safe movement of products to facilities, life-cycle analysis to evaluate environmental friendliness of products for recycling and re-use, received considerable consideration. A clear indication was given that the decision-making process regarding public sector procurement in healthcare has shifted from opting for the cheapest bid of a product to selecting the most economically advantageous contract (best value for money).

Procurers regarded the social dimension as the least important, giving the lowest scores to covering engagement with SMEs and MWOBs. It is thus proposed that the NWSSP should take further initiatives to enhance engagement with small, local or minority-owned businesses, as our findings indicate that by buying locally, healthcare organizations can greatly benefit the community as reinvesting in the local economy is one of the key factors to sustainable development. It appears that the major obstacles to SMEs actively engaging with the public sector are

time and capacity factors. Another important finding in our study was the fact that a substantial number of SMEs were unaware of the opportunity to supply to the NHS, which could successfully be rectified by the NWSSP reaching out and raising awareness.

Public sector procurers need to investigate the most efficient linkage between catalogue coverage and sustainable procurement. It was found that better catalogue coverage management provides more prompt services for the end-users, which in turn impacts on sustainable procurement and overall hospital performance. In terms of sustainable procurement, current and prospective suppliers should be given clear guidance on how to procure for contracts, while the procurement team should aim to accept orders from health boards for standardized items or even for items that have never been ordered before. Also, the catalogue should be well maintained by ensuring that pricing is up to date (Preuss, 2009).

This research suggests that in terms of environmental sustainability, procurement policies can be enhanced by placing emphasis on long-term sustainability. This will help NWSSP to measure the impact of sustainable procurement on NHS Wales and society. Furthermore, although the NWSSP is very interested in working with local companies, it seems to be extremely hard to find Welsh SMEs trading in certain sectors that are able to form joint-bidders (Walker and Preuss, 2008). The socially-responsible dimension could be improved by creating open days for suppliers and SMEs. To conclude, the study limitations are due to the small sample size concerning only NHS Wales. It is proposed that further research will be conducted in sustainable public procurement, and catalogue coverage and usage, on a wider scale, perhaps encompassing all NHS trusts in the UK.

IMPACT

This paper examines the procurement processes within NHS hospitals in Wales, and discusses recent laws, regulations and policies that affect sustainable procurement. As the authors attempt to share useful ideas for adaptation and new knowledge, they also highlight an approach that encourages communication between the public, researchers, legislators, SMEs and professionals who are concerned with sustainable procurement policies.

References

- Bloomfield, C. (2015), Putting sustainable development into practice: hospital food procurement in Wales. *Regional Studies*, 2, 1, pp. 552–558.
- Cabinet Office (2015), *Social Value Act Review* (www.gov.uk).
- Carter, C. R. and Jennings, M. M. (2004), The role of purchasing in corporate social responsibility: a structural equation analysis. *Journal of Business Logistics*, 25, 1, pp. 145–186.
- CMFT (2016), *Procurement Transformation Plan (PTP)*.
- Correia, F. et al. (2013), Low carbon procurement: an emerging agenda. *Journal of Purchasing and Supply Management*, 19, 1, pp. 58–64.
- Cox, A., Chicksand, D. and Ireland, P. (2005), Sub-optimality in NHS sourcing in the UK: demand-side constraints on supply-side improvement. *Public Administration*, 83, 2, pp. 367–392.
- Cresswell, K. M. and Sheikh, A. (2015), Health information technology in hospitals: current issues and future trends. *Future Hospital Journal*, 2, 1, pp. 50–56.
- Customer Board Members (2012), *NHS Supply Chain Customer Board Procurement Metrics*.
- Davison, B. and Sebastian, R. J. (2011), A detailed analysis of the relationship between contract administration problems and contract types. *Journal of Public Procurement*, 11, 1, pp. 108–126.
- Department of Health (2016), *NHS Procurement & Commercial Standards Towards Excellence*. Version 3.
- Elkington, J. (2002), *Cannibals with Forks: The Triple Bottom Line of 21st Century Business* (Capstone).
- Emmett, S. and Crocker, B. (2008), *Excellence in Procurement: How to Optimise Costs and Add Value* (Cambridge Academic).
- Erridge, A. and Hennigan, S. (2012), Sustainable procurement in health and social care in Northern Ireland. *Public Money & Management*, 32, 5, pp. 363–370.
- European Commission (2003), *Commission Recommendation of 6 May 2003 Concerning the Definition of Micro, Small and Medium-Sized Enterprises*.
- Feeley, T. H. and O'Mally, A. K. (2015), Getting by with a little help from my friends. *Organizations, Communication, and Health*, pp. 313–329.
- Flynn, A. and Davis, P. (2015), The policy–practice divide and SME-friendly public procurement. *Environment and Planning C: Government and Policy*, 34, 3, pp. 559–578.
- Grose, J. et al. (2012), Facilitating sustainable

- waste management behaviors within the health sector: a case study of the National Health Service (NHS) in southwest England, UK. *Sustainability*, 4, 4, pp. 630–642.
- Hayes, G. (2010), The NHS information technology (IT) and social care review 2009: a synopsis. *Journal of Innovation in Health Informatics*, 18, 2, pp. 81–88.
- Hinrichs, S. *et al.* (2014), Experience of procurement and supply chain management in the health sector in selected high-income countries. NIHR Journals Library (December).
- Hong, P. and Kwon, H.-B. (2012), Emerging issues of procurement management: a review and prospect. *International Journal of Procurement Management*, 5, 4, pp. 452–469.
- Hywel Dda University Health Board (2016), *NHS Wales Shared Services Partnership: Performance Report January 2016–March 2016*.
- Lindgreen, A. *et al.* (2009), Sustainable procurement in the United Kingdom public sector. *Supply Chain Management*, 14, 2, pp. 128–137.
- Loader, K. (2011), Are public sector procurement models and practices hindering small and medium suppliers? *Public Money & Management*, 31, 4, pp. 287–294.
- McCue, C. P. and Pitzer, J. T. (2005), *Fundamentals of Leadership and Management in Public Procurement* (NIGP).
- Moffett, S. and Walker, T. (2015), *Knowledge Management in the Public Sector: UK Case Study Perspectives* (Springer), pp. 67–104.
- Munoz, S.-A. (2009), Social enterprise and public sector voices on procurement. *Social Enterprise Journal* 5, 1, pp. 69–82.
- NHS Supply Chain (2013), *Meeting the Procurement Challenge*.
- NWSSP (2015), *Procurement Services Sustainable Procurement Policy* (NHS Wales).
- Parabl (2016), *Parabl Talking Therapies Partnership* (www.parabl.org.uk).
- Powys Teaching Health Board (2016), *NHS Wales Shared Partnership Performance Report: April 2016–June 2016*.
- Preuss, L. (2009), Addressing sustainable development through public procurement: the case of local government. *Supply Chain Management*, 14, 3, pp. 213–223.
- Public Policy Institute for Wales (2016), *Efficiency and the NHS Wales Funding Gap*.
- Shaw, J. (2011), Business population estimates for the UK and regions. *Economic and Labour Market Review* 5, 4, pp. 47–67.
- Srivastava, S. K. (2007), Green supply-chain management: a state-of-the-art literature review. *International Journal of Management Reviews*, 9, 1, pp. 53–80.
- Thai, K. V. (2008), *International Handbook of Public Procurement* (CRC Press).
- Thomson, J. and Jackson, T. (2007), Sustainable procurement in practice: lessons from local government. *Journal of Environmental Planning and Management*, 50, 3, pp. 421–444.
- Tudor, T., Baddley, J. and Mayhew-Mancho'n, L. (2015), Examining the uptake of low-carbon approaches within the healthcare sector: case studies from the National Health Service in England. *International Journal of Healthcare*, 1, 1, pp. 61–73.
- Van Raaij, E. M. *et al.* (2007), The impact of e-procurement quality factors on user acceptance of e-procurement systems. *Proceedings of the 16th IPSERA Conference*.
- Walker, H. (2015), Public procurement research at IPSERA-aligning research and practice, and future trends. *Public Money & Management*, 35, 2, pp. 141–144.
- Walker, H. and Brammer, S. (2012), The relationship between sustainable procurement and e-procurement in the public sector. *International Journal of Production Economics*, 140, 1, pp. 256–268.
- Walker, H., Di Sisto, L. and McBain, D. (2008), Drivers and barriers to environmental supply chain management practices: lessons from the public and private sectors. *Journal of Purchasing and Supply Management*, 14, 1, pp. 69–85.
- Walker, H. and Preuss, L. (2008), Fostering sustainability through sourcing from small businesses: public sector perspectives. *Journal of Cleaner Production*, 16, 15, pp. 1600–1609.