Benchmarking, Outsourcing, And Evaluation
In The IT Industry

or “Commoditization Is In The Eye Of The Stakeholder”

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Abstract
IT Evaluation and IT benchmarking share a common interest in measuring performance, assessing
efficiency and assessing effectiveness. This paper provides a history of the way in which IT services
have been evaluated for cost-efficiency by benchmarking. It explains how this niche consulting industry
originated from continuous improvement projects for in-house IT departments, and became adopted as
a contract management tool in response to the growth of outsourcing.

Successful benchmarking relies on finding a group of peer organisations who are comparable with each
other. Benchmarkers' techniques to identify differences between companies can therefore be adapted
to quantify the commoditization of IT, because a commodity IT service should be found at all
organisations without any differences.

The paper concludes that few outsourced IT services today meet the generally accepted definitions of a
commodity market. It proposes that CIOs can maximise alignment of IT with their business by learning
how to identify commodities and non-commodities, and managing them differently.

Keywords: Benchmarking, Outsourcing, Evaluation, Commoditization, Alignment

1 Introduction

The three related disciplines of Evaluation, Performance Measurement, and Benchmarking,
have been fellow travellers on the same road when applied to IT. They share a common
interest in metrics which quantify the efficiency of an operation or the outcome of a process.

Performance Measurement meets the needs of stakeholders (most commonly line managers)
who wish to measure regularly their effectiveness (doing the right things) and efficiency (doing
things right).

Evaluation work also measures performance, particularly changes over time, most often
triggered by a major project or change. It meets the needs of those who must predict how the
change will affect performance in the future (in order to build the business case), or to who
wish to understand after the change whether it was successful in improving performance.

Benchmarking compares the performance of different organisations. This may be done for
the benefit of line management, like performance measurement; and it may also be done to
help justify an investment or to demonstrate the success of an initiative. It differs from pure
Performance Measurement and Evaluation by introducing external comparisons – setting
targets based on what has been achieved by other organisations.

This paper is based on my personal experience over the last 10 years, first as a benchmarker
at Compass, META Group, and Gartner, and more recently as an IT outsourcer at Hewlett-
Packard. They are my personal views, not HP’s corporate position. I wish to thank various
friends and colleagues from Compass, Gartner, and HP who have reviewed the paper.
2 IT Benchmarking

2.1 The IT Benchmarking Industry

IT Benchmarking is a specialised form of consultancy. The market is dominated by two players, Gartner and Compass.

Gartner is a $1 billion IT research and consulting firm who entered the benchmarking market through the acquisition of Real Decisions in 1993 (Gartner 1993). They do not disclose their benchmarking revenues. However since they consider benchmarking as part of their consulting division, revenue is presumably less than the $259 million consulting revenue they reported for 2005 (Gartner 2005).

Compass is a privately held group founded in 1980 who do not disclose their revenues, but report that in 2004 they carried out 600 engagements (Compass 2004).

The market size is not known for sure, since neither of the major players disclose their benchmarking revenue. My personal opinion is that the market is worth approximately $200 million per year, and that these two organisations account for at least 75% of benchmarks done at large corporate IT departments. The remainder is done by a number of smaller organisations:

- META Group (up until their acquisition by Gartner in 2005);
- spin-offs from META such as XMG and Experton;
- Maturity (a German start-up formed by Gartner salesmen and Compass consultants);
- Global Information Partners;
- Hackett;
- Metri MC, a new European start-up;
- TIF (The Infrastructure Forum, a UK association of IT directors).

2.2 Why Do Organisations Benchmark?

It is very difficult to find independent case studies of benchmarking in action. The numbers benchmarked are extremely sensitive commercially, and almost all projects bind the benchmarkers to strict confidentiality agreements.

In at least one case, however, a benchmarker’s report has been placed in the public domain: Gartner’s study of the IT department of the State Of Texas has been published on the Internet (Gartner 2005).

There are marketing case studies from Gartner (Gartner 2006), and Compass describe projects with National Australia Group (NAG) and a second un-named US customer (Compass X). There are also a few press references, such as those to benchmarks of a Dupont/CSC contract (CFO Asia 2003) and an Anthem/ACS contract (Outsourcing Journal 1997).

The benchmark which achieved most public awareness was also probably the most bitterly disputed benchmark in history, and resulted in a legal dispute between Cable & Wireless and IBM during 2002 (CEDR 2002).

Why do organisations benchmark their IT departments? My experience is that customers have one or more of four motives:

1. To demonstrate to the consumers of their services that they are receiving value for money;
2. To stimulate continuous improvement - for example, identifying inefficient processes or poor service quality;
3. To set targets for line managers - for example making payment of bonus dependent on achieving performance targets set by the benchmarker;
4. To regulate prices over a long-term contract with a supplier.
2.3 The Benchmarking Process

There are variations between the methodologies of the different benchmarkers, but essentially they follow the same six step process.

Firstly, the scope of the benchmark must be agreed. This is important in all projects, but is critical for a benchmark. Decisions about what is or is not included in the comparison can make the organisation look either very efficient or very inefficient.

Secondly, the benchmarker will ask questions about the organisation. The information they need varies depending on the function being benchmarked, but typically includes:

- counts of the IT hardware and software assets managed;
- a breakdown of costs including
  - capitalised purchases;
  - leases;
  - software licences;
  - personnel counts and costs;
  - contractors;
  - maintenance agreement, sub-contract or outsourcer costs; and
  - miscellaneous costs such as facilities or occupancy, consumables, and allocations from other corporate functions;
- service level agreements;
- measures of process quality and/or problem levels;
- utilisation levels of assets such as servers;
- sometimes also user satisfaction.

The questions are carefully worded to ensure that comparisons between different organisations are accurate. The benchmarkers consider these definitions to be a key item of intellectual property. It is common for the benchmarker’s consultants to spend time on-site with their customers, helping to collect the data. This ensures that it is more accurate than, for example, a questionnaire or survey which collects data without direct contact with the organisation being benchmarked.

In the third step, the benchmarker uses the collected data to calculate a set of performance metrics or Key Performance Indicators for the organisation being studied. The most common metrics calculated are:

- unit costs (the cost of a function divided by the amount of work done); and
productivity ratios (the number of people performing a function divided by the amount of work done).

This step is often a convenient point at which to pause and validate that the supplied data was correct. It is common for changes to be made to the data originally submitted.

Fourthly, the benchmarker will select a group of peer organisations with whom their customer will be compared. The data on these peer group members is gathered from previous benchmark projects and stored in the benchmarker’s database. Benchmarkers use a small group for the comparison, most commonly between six and eight peers. There are nearly always at least four peers: fewer than that can cause an individual peer to distort the comparison. It is rare to use more than ten. The more peers are used, the more differences there will be between the benchmarked organisation and some of the peers. The peer group members’ data is kept confidential, using one of two techniques. Either the name of the peer group member is kept confidential, but their individual data points are provided in the benchmark report; or the peer group member names are given but only the minimum, mean, and maximum of the peer group metrics are disclosed.

The fifth step is one of normalisation or adjustment to the peer group data. No matter how carefully the peer group has been selected, there will always be differences between the benchmarked company and some of the peer group members. Normalisation, or adjustment, is carried out in order to compensate for this and avoid a flawed comparison. The benchmarking industry usually calls this normalisation, but I find the term to be poorly defined and to raise widely varying expectations. I will refer to it as adjustment from now on. At a minimum, adjustment will compensate for the differing sizes of the organisations. For example, a target annual cost for the benchmarked company will be calculated by multiplying their volumes by the unit costs of the peer group average. More complex adjustments may be made to allow for differences in scope or responsibility. For example, the benchmark database may include the cost of office accommodation for IT workers, but this might not be included within the IT budget of the benchmarked organisation. The benchmarker will therefore recalculate the peer group average excluding this item in order to set a target for the organisation’s budget.

Finally, and most importantly, the benchmarker will compare their customer against the peer group, draw their conclusions, and make their recommendations. The depth of this analysis and the degree of insight varies widely depending on:

- the policy of the benchmarking company;
- the requirements of the client;
- the cost of the benchmark; and
- the skill of the consultant.

At a minimum, the benchmarker’s report may simply identify gaps between the organisation and the peer group and recommend further investigation. At best the benchmarker’s report serves as a full operational review, analysing the differences, making specific recommendations for change, and using the peer group targets to quantify money that can be saved or processes improved.

The full process rarely takes less than four weeks, and more commonly takes six to twelve. It is not unusual for projects to be delayed during the data collection phase, which is the most time-consuming for the customer. It has been known for benchmarks to linger for six or even twelve months before they are finally completed or cancelled. The cost of a benchmark is rarely made public. However, a Forrester report (Forrester, 2006) states “Benchmarking specialists like Compass can charge anywhere from $50,000 to $250,000 for these projects, which typically last six to eight weeks”.

At its best, benchmarking can be a valuable tool for managers to understand their organisation better and plan improvements. There are, however, two frequent challenges. The first is the effort of collecting consistent and accurate data for the benchmarker. This frequently reveals previously unknown flaws in record-keeping, which is unpleasant news for the managers who commission the benchmark. As a general rule, the larger the organisation, the more likely that data collection will be difficult. The problem is not that there is no information – it is that data tends to be available from several sources which contradict each
other. Much time can be spent resolving these differences. The second challenge is to gain continual value from repeated benchmarking. Often the recommendations from a benchmark can take a year or more to implement. Repeating the benchmark one year later, while recommended by some benchmarkers, has been found by many to deliver few additional benefits. Instead they benchmark on a two or three year cycle.

### 2.4 Industry’s Ability To Benchmark

The limitations of benchmarking are expressed well by the saying

*“Not everything that counts can be counted, and not everything that can be counted counts”*  

(Einstein, see references). There are some functions of an IT organisation which lend themselves very well to process measurement and quantification of output. For example, at an IT Help Desk:

- workload can be measured in incoming calls;
- unit costs can be expressed both ‘per user supported’ and ‘per call’; and
- productivity can be measured as ‘calls handled per agent per day’.

However not all IT functions are as easily measured, to the great frustration of process models such as ITIL and COBIT which recommend extensive measurement. Try measuring, for example, the output of the IT architecture team.

Figure 2 provides a ‘map’ of an IT department, showing 30 separate functions which can be isolated and individually compared against a peer group.

![Figure 2 – Benchmarking “Map”](image)

The dark functions are those where benchmarking is well established, with a broad industry consensus on the metrics to compare and the validity of such comparisons. These include Service Desks, Voice networks, Office Applications, Mail and Collaboration, Desktop and Mobility, Desktop Infrastructure Servers, Local Area Networks, Console Operations, Mainframes, Storage farms, and even the operation of HR applications.
The grey functions are those where benchmarking is frequently attempted, but is not very
satisfactory. This can be either because there is no consensus on how to measure the
function, or because the cost drivers of the function are not sufficiently well understood.
Comparisons are likely to be criticised or rejected entirely by line managers of these
functions. These include Wide Area Networks, Data Centre LANs, Network Perimeter
management, Data Centre hosting, Unix servers, Windows servers, Proprietary Midrange
servers (such as AS/400 and Tandem), Supercomputers (such as Crays or ‘utility compute
farms’), Business Continuity, Application Operations, Application Maintenance, Customer
Relationship Management (CRM), Contact Centre technology, Purchasing, and Finance
applications.

The white functions are those where I have seen few effective ways of benchmarking, though
many people have tried. These include IT Management and Strategy, IT Projects and
Development, Professional Services Automation (PSA), Sales Force Automation (SFA),
vertically oriented Line Of Business applications as found in banking, trading, insurance
claims, billing, manufacturing, and logistics, and finally IT support for the R&D function.

It is striking that the areas of IT which might be expected to have most strategic impact on an
organisation are those which are hardest to benchmark. Conversely, many of the more easily
benchmarked functions can be viewed to some extent as “infrastructure” — necessary, and
highly enabling when used well, but rarely a competitive differentiator.

2.5 Criteria For Peer Selection

More time is spent during a benchmark discussing the members of the peer group than
anything else.

Customers’ expectations for a peer group are very simple. They want to ensure that the
comparison will be valid, and is based on genuine gaps in performance levels rather than
differences in industry or environment that are outside management control. They therefore
look for:

- industry peers who have similar requirements of their IT function;
- the same geography (recognising that labour rates, tax, and legal considerations can
differ between countries and even cities);
- organisations of similar size (recognising economies of scale); and
- organisations of equivalent complexity (though this is extremely subjective and is
interpreted differently by everyone).

As a benchmarker I would illustrate the challenge these requirements cause, using a fictional
example based on an entirely innocent European airline. The story would describe a
customer who expressed a willingness to benchmark provided that the benchmarker can
provide a group of peers from

(a) the same industry - the client being a global airline; and
(b) the same geography - the client being based in The Netherlands.

The customer would commit to starting a benchmark as soon as such a group could be
assembled, confident that it would never happen.

It is almost impossible for a benchmarker to meet requirements such as these. It might be
possible were a group of industry peers to agree to collaborate and share information. In
general, though, organisations resist this, because the industry peers they are interested in
are also their competitors. Benchmarkers therefore recommend peer group members who
are drawn from either different countries, or different industries, or both. This solves the
problem of finding a peer group, but opens up questions about the adjustments which should
be made for differences such as currency, depreciation policies, local labour rates,
employment benefits, and industry regulation.

If the peers are to be drawn from all countries and all industries, what criteria should be used
to select them? Research at HP has identified 120 potential cost drivers for desktop services
alone. By extrapolation from the Benchmarking Map (Figure 2) we can estimate that there
are as many as 3600 different factors which could be considered. There are several ways in
which these factors can be categorised - I have found ‘the Five Ses’ to be a convenient mnemonic:

1. **Scope**: the hardware assets, software licences, support, and management tasks which are the responsibility of the benchmarked organisation;
2. **Scale**: the size of the benchmarked organisation, measured by counting the principle workload or volume of work to be done (often the same volume which is used as the denominator for unit costs: "per desktop", "per MIPS", and so on);
3. **Service Levels**: the targets set for availability of a service, agreed service times, planned maintenance windows, maximum outage lengths; or response times for a transaction, service, or process. Process quality, defect rates, or user satisfaction targets can also be considered here;
4. **Sites**: the geography in which services are delivered to and from, taking into account also how widely dispersed the sites are. (It is easier to support 1,000 servers in one data centre than 1,000 servers in 100 different cities.);
5. **Specials**: a deliberately open-ended category intended to capture any special conditions or restrictions under which the services are delivered. For example, if a business insists that an application must run on a dedicated server and may not be consolidated, this should be taken into account when comparing the efficiency of server management against a group or peers where the businesses are more enlightened. When IT services are outsourced, this category also takes into account contractual terms and conditions such as contract length, volume commitments, financial engineering such as the acquisition of assets or the transfer of people, termination conditions, penalties, and service credits.

3 Benchmarking And Outsourcing

3.1 Growth Of Outsourcing

The growth of outsourcing has introduced major changes to the benchmarking industry, making it simultaneously more important and more difficult.

Estimates of worldwide IT spending are around $1.2 trillion (IDC 2005), while estimates of the worldwide IT services market are around $600 billion (Gartner 2006). 10 years ago, I estimate that 95% of benchmarks were carried out for in-house IT departments. Today, I believe that around half of them are carried out on outsourced IT services.

Customers who outsource their IT organisations have some interesting challenges. Contract lengths are long – commonly five years, sometimes ten or more. Prices are set at the beginning of the contract, nearly always through a competitive bidding process which identifies the best market price at the time of awarding the contract. How, though, does a customer ensure that they continue to pay a fair market price until the end of the contract? No-one knows now what market pricing will be like in 2011 – in fact, it is a fair bet that there will be new IT services consumed then that we haven’t even seen as of 2006. (It is not practical to repeat the bidding process every year. The process of selecting a supplier and awarding the contract is itself lengthy and time-consuming, and the transition of services to the outsourcer typically takes 3 months and can be as long as two years.)

Benchmarking was quickly adopted as a solution to this problem (Barton 2004). For the last ten years, the practice has been growing to include a benchmarking clause in an outsourcing contract. This states that the customer may periodically engage a benchmarking company to review the price of the IT services. The outsourcer is obliged to adjust their prices to the benchmarker’s findings.

This trend has caused two major changes to the benchmarkers’ work. Firstly, there is less information available to them. When an in-house IT organisation is benchmarked, they provide the benchmarker with full details of cost structures and internal processes. Outsourcers rarely do this. Aside from a few rare open book contracts, most outsourcers agree to deliver a given service volume to a given service level at an agreed charge. Details of the outsourcer’s internal financial arrangements, whether it be head-count, cost, overheads, risk, or margin, are not usually shared with their clients. Neither are they available to the benchmarker, who must make their calculations without them.
Simultaneously, however, the impact of the benchmark has been substantially increased. In an in-house benchmark, a gap between the customer and the peer group’s performance might stimulate a discussion, suggest some changes, or perhaps initiate a change project. When benchmarking an outsourcer, however, the results are final and binding. The outsourcer is obliged to change their prices to meet the benchmark targets. Accuracy in benchmarking is much more important than it was before.

3.2 Accuracy Of Benchmarking

How accurate should a benchmark be? At the time of writing (July 2006) there are no agreed standards. Most benchmarkers provide a single point price target, and do not make any statement concerning the accuracy of their work. Indeed the value of their work to their customers would be significantly diminished if they did.

Having said this, it is possible to set some targets for benchmark accuracy. All outsourcers and most customers would agree that it is in no-one’s long term interest for an outsourcer to be tied into a loss making contract. The outsourcer will be obliged by their customer to meet the terms of the contract, but will be obliged by their shareholders to do so at the lowest possible cost. There will be no possible room for innovation or partnership, and the service delivery infrastructure can be expected to age, starve, and wither as the contract proceeds. It follows therefore, that benchmarks should be accurate enough to ensure that an outsourcer is not inadvertently forced into a loss-making contract.

How much profit, then, should outsourcers make? Research from Ovum (Ovum 2006) reports the operating margins of 23 large European service providers in 2005. The average is 5%, with an interquartile range between 3.2% and 7.5%.

This gives us some guidance about the accuracy required of a benchmark. A benchmark target which was inaccurately high by 5% might enable the outsourcer to make a level of profit which the customer would regard as excessive. On the other hand, a benchmark target which was inaccurately low by 5% would force the outsourcer into losses.

This has two significant implications for the benchmarkers. The first concerns the size of the adjustments the benchmarker makes. If these adjustments are more than 10%, then the accuracy of the adjustments becomes critical to ensuring the accuracy of the benchmark overall. It follows that benchmarkers should do all they can to select peers where minimal adjustments are needed. It also follows that the adjustments should be drawn from the benchmarker’s database, not a matter of consultant opinion, and the benchmarker should be obliged to document and provide explanations for their adjustments.

The second implication concerns the range of the prices in the benchmarker’s peer group. It is not in the benchmarkers’ power to control the range of unit costs and prices which they find at their customers. If they find a set of unit costs which vary by +/- 50%, they must find a way of working with them. There is, however, a burden of proof on them to show that such a wide price range is not caused by differences between the peers; or that they have made adjustments for all significant differences between the peers. I propose that, after any necessary adjustments, all the prices in a peer group should fall within +/- 5% of the peer group average (mean). My reasoning is that, since an outsourcer might reasonably be expected to make an operating margin between 0% and 10%, any price point which is outside that range must be either (a) delivering services which are in some way different to the other peer group members and which has not been adjusted for; or (b) a contract where the margin is either unreasonably high or unreasonably low. Either way, the data appears to be unsuitable for use in the peer group.

4 Commoditization Of IT

4.1 The Debate Over Commoditization

This question of the similarity of IT services is reminiscent of the recent discussions about the commoditization of IT. Nicholas Carr’s article led the way:
“IT has become a commodity” (Carr, 2003)

It is not hard to find journalists, customers, or even suppliers who agree:

“Outsourcing is the obvious way of commoditising IT” (Branscombe 2003);

“The commoditization of e-mail pricing … crashed the party” (Mediapost unknown);

“Standardisation and commoditization of core systems is, we think, more likely to offer a long term solution” (Kyle 2006);

“Is Software A Mere Commodity?” (Sun 2004)

During the negotiation of an IT outsourcing contract, the different parties tend to take opposing views on this point. Vendors adopt the position that “our brand delivers much value-add which is intangible, such as confidence, trust, quality, innovation, and partnership”. Customers take a quite different view: “your services are identical to the others, so you should therefore reduce your price”. Some customers have taken this to such extremes that the operation of their main ERP systems, systems which one might expect to be key and critical to the operation of their business, have been outsourced based on a reverse auction conducted over an internet web-site.

It would be useful for all parties if we could define or even quantify the level to which an IT service has become commoditized. I turned to my dictionary for a definition of “commoditization”, and found the results surprising. Most sources refer back to Marx (Marx, 1867), who described the process through which human labour is turned into an offering of marketable value, which he named a ‘commodity’. Later writers have attempted to refine this definition (Hart, 2006). In the short literature search I carried out for this paper I was unsuccessful in tracking down an authoritative definition for “commoditization”, but it seemed to me that in modern use the word “commoditization” has become disconnected from the original meaning of “commodity”. I offer my own definition, based on the three main connotations of “commoditization” that I found in the references above:

1. undifferentiated from competitor’s offerings;
2. easily substituted by competitor’s offerings; and
3. competing primarily on price, usually leading to significant price erosion.

I shall define a commoditized market, therefore, as one in which “all suppliers offer identical products or services, which can be easily substituted for each other, competing primarily on price”.

(By the way, in the course of this research I came across a diverting fact which amused me, though not directly useful to this discussion. Onions are not commodities (Onions, 1958). In the US, the 1958 Commodities Exchange Act defines a number of agricultural products for which futures may be traded, but specifically excludes onions. I have been unable to find out why.)

4.2 Benchmarking & Commoditization

Commodity services, by definition, should be easy to compare. Yet there is not, to date, any “Parker Guide” or “Blue Book” which allows customers to compare the price of IT services the way they can compare second-hand car prices. If there was, then we wouldn’t need benchmarkers.

So the ease with which IT services can be benchmarked should tell us something about how commoditized they are. To be specific, the longer the list of information that a benchmarker needs to fully describe a service, the more scope there is for differences between the services offered by different suppliers. (Recall from above that internal HP research suggests there may be as many as 3600 different price drivers influencing the total cost of IT to an organisation.)
Furthermore, the larger the adjustments a benchmarker makes when comparing two services, the less commoditized the services must be. A benchmark where adjustments of 25% or more have been made to the peers would not seem to be dealing with identical services. If the services were identical, the peer group prices might reasonably be expected to vary within a range of +/- 5%, within the common operating margins for IT service providers.

4.3 Outsourcing And Commoditization

If we adopt the definition of commoditization above, then how well does it apply to the IT outsourcing market? There are two key areas where the market currently does not meet the definition.

Firstly, most IT services fail to meet the ‘easily substituteable’ part of the definition. The most easily substituted ITC services are network carrier services, where a circuit between two cities from one carrier can usually be replaced with that of another carrier in a matter of a few days with little or no down-time. As a result, contract lengths for telecom carrier services tend to be quite short – often 1 year, rarely more than 3 years. Recent grid computing offerings are also highly substitueable.

Substitution of IT outsourcers is a much longer process. As described earlier, selecting a new outsourcer often starts with six to twelve months of defining requirements, followed by a competitive bidding process. The successful bidder will begin with a transition period of 2 or 3 months, and it is not unusual for this to be followed by a longer transformational period as the new outsourcer integrates the IT assets into their own systems and processes. Substitution of one provider for another is perfectly possible – but it is not quick and easy.

Secondly, IT outsourced services are priced in such a wide variety of ways that it can be hard to know what prices to compare, let alone understand the differences between services offered by different providers. I have seen well over 30 different price units in practice in the IT outsourcing market:

- Per MIPS
- Per CPU hour/min/sec
- Per Gbyte/Tbyte
- Per tape mount
- Per server
- Per server CPU
- Per tpmC
- Per database instance
- Per middleware instance
- Per square foot
- Per rack
- Per user (named / concurrent)
- Per handset
- Per voicemail box
- Per switch/router
- Per location
- Per firewall
- Per network port
- Per device
- Per desktop/laptop
- Per printer
- Per page
- Per call/contact
- Per ticket
- Per user
- Per mailbox
- Per day/hour
- Per KLOC
- Per Function Point

This variation is partly caused by different price units being suitable for the different IT functions shown in the Benchmarking Map (Figure 2). However, for many of those IT functions there are three or more price units commonly in use. Some contracts will price in great detail, using all 30 pricing units. Others will use three or four price units only and bundle a complete range of IT services under this simpler tariff.

Further more, there are at least 8 different pricing methods in use. By pricing methods, I mean ways in which the monthly charges are calculated. For example, we can find:

- flat charges (the same amount is charged no matter how many items are consumed);
- base + unit (a flat charge is made every month, supplemented by an additional charge for each item consumed);
- unit priced or ‘P times Q’ (charge is calculated by multiplying a unit price by the quantity or volume consumed);
- volume breaks (the unit price is varied if demand for an item exceeds or falls below agreed levels. The range of volumes within which unit prices do not change is

http://www.academic-conferences.org/ecite/ecite2006/ecite06-home.htm
usually known as the ‘dead band’, with unit prices for higher than expected volumes being termed Additional Resource Charges (ARCs), and unit prices for lower than expected volumes being termed Reduced Resource Charges (RRCs, usually pronounced “rooks”);

- consumption-based (unit pricing based on the number of units that is consumed by the customer) or capacity-based (the number of units which must be provided by the outsourcer to provide for growth, spares, and redundancy);
- flat-band pricing (the same amount is charged each month provided the consumed volumes remain within a dead band, with ARCs and RRCs being charged outside the dead band);
- blended pricing (several different items are charged for under a single unit price);
- multi-year pricing (prices are pre-determined for each year of the contract, sometimes including the cost of transition and transformation); and
- multi-currency pricing (the outsourcer charges the customer’s local business units in their currency of choice rather than in a single standard currency).

These variations do not sound like a highly standardised commoditized market.

4.4 Do Commodities Exist?

In order to test the theory about market price variations for commodities, I’ve tried applying the +/- 5% rule to a number of other purchases which I have made recently. The ideal markets to research for this are the conventional commodities markets: crude oil, metals, raw materials, agricultural products, and I would recommend this as a future line of research.

Closer to home, however, I’ve had four different quotations to replace the windows in my house. I can’t see any significant difference between their products. They are all members of the same double-glazing trade bodies. I’m willing to pay extra for a prompt service leaving no mess behind, but I have no way of verifying whether a higher price will secure this. Yet the quotations range from 18% less than the mean to 22% above.

I’ve had three quotations for people to cut down some trees in my garden. They all seemed knowledgeable in their field, they all promised to clear up their mess behind them. Their prices range from 52% below the mean to 78% above the mean. Perhaps the higher price secures more expert tree surgeons? But how can I, as an non-expert, be sure?

Finally I turned my attention to the ubiquitous Mars Bar, an identical product which should surely cost pretty much the same everywhere? I found four difference prices: 35p from a vending machine, 39p from my local store, 2 for 70p offer from another store, and a multi-pack of 4 for £1.39 from the supermarket. The prices range from –0.25% of the mean to +8.6% of the mean.

Perhaps we must introduce a new term: a semi-commodity. This would be a product or service for which the market is tending towards uniform undifferentiated products, but where such consensus has not yet been reached. The benchmarking and outsourcing industries can guide us here. The Benchmarking Map (Figure 2) can be used as a starting point to understand where a consensus has been achieved on defining and measuring an IT function.

Or perhaps commoditization is more of a negotiating position than a fact, and my search for a definition will be a fruitless one. If so, we must conclude that, to adapt the old proverb (Wells, 1937):

“commoditization is in the eye of the stake-holder”.

5 Commoditization And Alignment

A better understanding of commoditization can contribute to the long-running discussion of the value of IT and alignment with the strategic goals of the organisation it serves.

Work such as that by Strassmann (Strassman 1990) and Brynjolfsson (Brynjolfsson 1993) has been unable to find a direct correlation between investment in IT and good business
performance. One reason is the enormous difficulty in getting consistent data on IT costs. As is well documented by Bannister, McCabe and Remenyi (Bannister, McCabe and Remenyi 2005) and as the benchmarkers find every day, record keeping in corporate IT departments can be surprisingly inconsistent, with widespread variations between different companies in what is included in the IT budget.

However, all the sources I have ever seen agree that IT spending varies by vertical industry sector. (The numbers shown at ITMWEB 2003 are typical of the reports published each year by industry analysts such as Gartner, Forrester, and IDC.) This leads us to two very interesting questions for future study. Firstly, “why?”; and secondly, “how can this be, if IT is a commodity?”

For example, do some industries consume commodity IT services that others do not? The Benchmarking Map (Figure 2) would suggest this is rare. Benchmarkers compare the building blocks of IT across all industries: desktops, servers, databases, networks, applications. Even ERP applications are found in all industries, though arguably in different forms. Only the vertical Line Of Business applications and R&D boxes in the top left hand corner hint at applications which could be found in one vertical and not in another.

Or do some industries consume the same commodities as others but more of them, causing them to buy services at the same unit price yet spend more per employee on IT? This is more likely to be part of the answer. For example, retailers do not provide an individual desktop PC for each of their store assistants; but investment banks will provide their traders with three or more.

Or is the answer in being able to separate out the commodities and the non-commodities? If my competitor buys the same IT commodities as me, it will be difficult to use them to gain competitive advantage. Conversely, if my competitive advantage is to be gained by, for example, a unique manufacturing process, then it is unlikely that I will be able to a packaged third party application which fully manages such a unique capability.

This provides a very useful way of viewing IT services. When services are commoditized, then all industries presumably buy them in the same form. If spend varies by vertical sector, then the differences must in part be found in uncommoditized services. These, which are not found in identical form in all companies, are surely the more likely services to be delivering competitive advantage.

Finally, if it is true that as much as half of the worldwide IT spend is now spent with outsourcers, then the task of the CIO becomes very clear. Effective IT management is a matter of identifying those services which are commodities and managing them for cost; while at the same time identifying a small number of services which enable a business process to deliver competitive advantage to the organisation. Managing these for cost would surely be a losing strategy. They must be managed for reliable delivery and prompt reaction to the organisation’s customers.

6 Conclusions
In conclusion:
- Nearly half the worldwide IT spend is now spent on purchased services rather than owning assets and employing personnel;
- Though many people describe these services as commodities, most fall short of the usual definitions of a commoditized offering;
- Multi-year outsourcing contracts will continue to need a price control mechanism. There is little choice other than benchmarking;
- If benchmarking is to play a constructive role in managing these contracts, it should be carried out to an accuracy of +/- 5%;
- I propose that market price for commodities will vary by no more than +/- 5% of the mean. If larger variations are observed, then the offering is not a commodity. I invite further research to find out whether such tight market pricing is seen in the conventional commodity markets;
Most organisations consume mixtures of IT services, some much more commoditized than others; Successful use of IT involves managing the genuine commodity services for cost, while identifying a small number of IT systems which are genuinely unique and can give competitive advantage. This may help explain why IT spend varies so much between industries.

References

http://www.compassmc.com/destinations/our_views/views/fairmarket.htm
http://technology.guardian.co.uk/online/story/0,3605,975118,00.html,
Compass (NAG) -
Compass (X) at
http://www.compassmc.com/destinations/case_studies/studies/home_issue03.htm
Einstein, A. (?) Most sources attribute the phrase: “Not everything that counts can be counted, and not everything that can be counted counts” to Einstein. Some say more specifically that it was written on a sign hanging in his Princeton office. I have been unsuccessful in finding a precise reference to the saying in his writings, and at least one source concludes he probably was not the originator.
(http://www.cs.ucla.edu/~klinger/tenpp/11_einstein.html).
Gartner (1993) http://www.gartner.com/it/about/acquisitions.jsp
Gartner (2006)
http://www.metrics2.com/blog/2006/06/14/worldwide_it_services_revenue_totaled_6244_billio
n.html


Mediapost (unknown) http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticleHomePage&art_aid=45775

Onions (1958) (http://www.cftc.gov/opa/glossary/opaglossary_co.htm


