

Cross-cutting topics – Part 1: SPPI – Time-based methods

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Overview

- Introduction to time-based methods
- Weaknesses with methods
- UK application of methods and problems
- Dutch experience of testing alternative methods
- Conclusions and discussion

Introduction to time-based methods

- Aim to capture price of time spent providing service
- Can be applied as:
 - Hourly charge out rate
 - Weighted average of hourly rates
 - Realised hourly rates
 - Hourly list rates
 - Wages rates

Reasons for the use of time-based methods

- The service cannot be adequately defined.
- The service is tailored uniquely to customers and cannot be repeatedly priced.
- The pricing mechanism adopted by the respondent is related to time worked.
- The compliance cost of other methods is high
- Generally used a last resort!

Weaknesses of time-based methods

There is a risk that:

- Resulting volume measures give the time devoted to service provision rather than the volume of services themselves
- changes in labour productivity are not captured.
 - No change in the product is determinable apart from changes in staffing structure.
 - Changes of roles and duties occur within staffing levels. This is explicitly a change in the quality of labour provided – in contradiction to the presuppositions.

Weaknesses of time-based methods: example...

- **Productivity** = $\frac{\text{real output} - \text{real intermediate consumption}}{\text{hours worked}}$
- **Assumptions:**
 - Audits in periods t and $t+1$ are comparable
 - No quality changes: reason for reduction of hours worked is due to knowledge of the case from the previous period
 - Income=output=value added (no intermediate consumption)

Weaknesses of time-based methods: example...

Period	Hours worked	Invoiced price (income)	Realized hourly rate	Price-index	Real value added	Productivity	Productivity growth
Realized hourly rates							
t	500	50,000	100.00	100.00	50,000	100.00	0.00 %
t+1	450	50,000	111.11	111.11	45,000	100.00	
alternative: Specification of a specific auditing service for model pricing							
t	500	50,000		100.00	50,000	100.00	11.11 %
t+1	450	50,000		100.00	50,000	111.11	

Best Practice

- Ensure consistency between prices and labour input
- Time-based methods should be applied in “bands of expertise”
- Try to capture changes in duties, roles and responsibilities within “bands” and try to quantify them
- Identify changes in coverage of billable hours
- Determine whether rates have been influenced by changing technology, administrative reorganisation, changes in billing structure...
- Detect and measure changes in productivity in individual service industries

UK Approach to time-based methods

- Methods introduced in 2010 for professional services.
- We collect:

Grade, position or category of personnel	Number of chargeable hours billed in the quarter	Standard hourly charge out rate (£)	Total fees using standard hourly rate (£)	Total fees billed by all grades in the quarter (£)
Partner	210	275	57,750	
Partner	190	250	47,500	
Associate	100	200	20,000	
Solicitor	100	150	15,000	
Legal executive	150	125	18,750	
Trainee	100	100	10,000	
Total			169,000	165,000

UK Approach to time-based methods

- Base price: Fees billed (including discounts) for chargeable hours worked in the base period

Grade, position or category of personnel	Number of chargeable hours billed in the quarter	Standard hourly charge out rate (£)	Total fees using standard hourly rate (£)	Total fees billed by all grades in the quarter (£)
Partner	210	275	57,750	
Partner	190	250	47,500	
Associate	100	200	20,000	
Solicitor	100	150	15,000	
Legal executive	150	125	18,750	
Trainee	100	100	10,000	
Total			169,000	165,000

UK Approach to time-based methods

- Second period:

Grade, position or category of personnel	Number of chargeable hours billed in the quarter	Standard hourly charge out rate (£)	Total fees using standard hourly rate (£)	Total fees billed by all grades in the quarter (£)
Partner	200	300	60,000	
Partner	210	275	57,750	
Associate	110	210	23,100	
Solicitor	120	150	18,000	
Legal executive	140	125	17,500	
Trainee	90	100	9,000	
Total			185,350	182,000

1 – Realisation ratio – ratio of fees actually billed to standard rates

$$=0.982$$

UK Approach to time-based methods

2 – Re-price base period hours

Base period

Grade, position or category of personnel	Number of chargeable hours billed in the quarter	Standard hourly charge out rate(£)	Total fees using standard hourly rate (£)	Total fees billed by all grades in the quarter (£)
Partner	210	275	57,750	
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Trainee	90	100	9,000	
Total			185,350	182,000

Second period

=£180,000

UK Approach to time-based methods

3 – Adjust using realisation ratio:

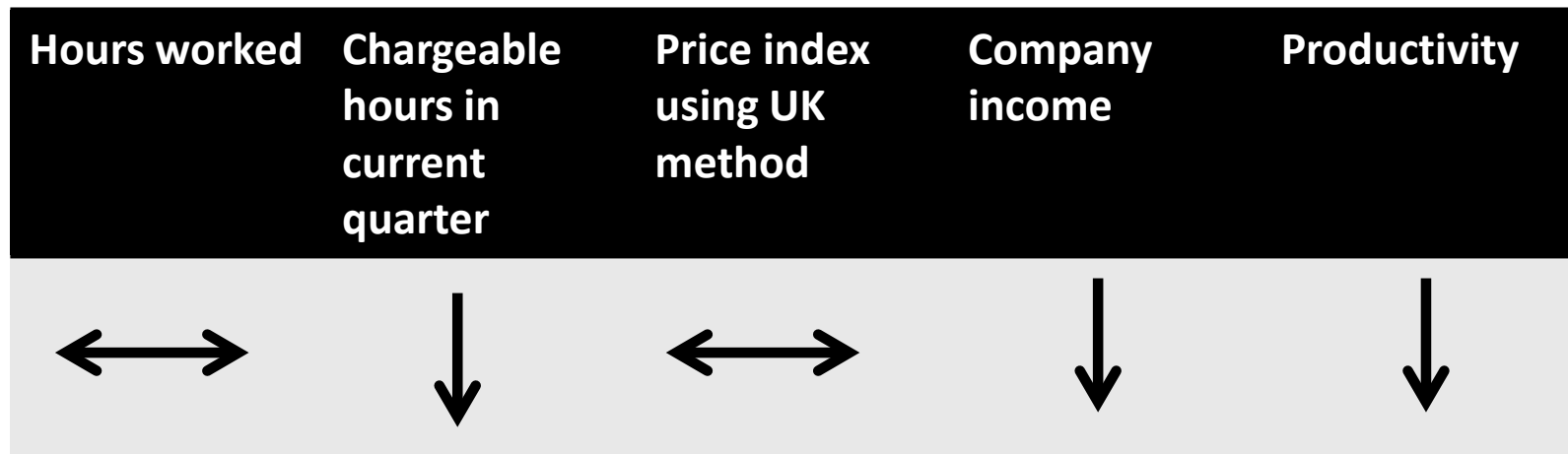
$$\begin{aligned}\text{Price} &= \text{£}180,000 * 0.982 \\ &= \text{£}176,747\end{aligned}$$

4 – Calculate price relative

$$\begin{aligned}\text{PR} &= 176,747/165,000 \\ &= 1.07\end{aligned}$$

UK method – accounting for productivity

- Some productivity captured by methods alone
- For example – new member of staff



Assumptions:

- Standard hourly rates are constant and no discounts are offered
- Hours worked remains constant
- Income=output=value added

UK method – accounting for productivity

- Some productivity captured explicitly on questionnaire:

Section B - Additional Information

It is important that we capture any changes to your business that may impact prices or the service offered to ensure price changes are measured on a comparable basis.

Please use this space to provide any relevant additional information about the data that you have supplied, for example:

- changes that are likely to impact productivity such as the introduction of new technology, system changes or training
- revisions to grading structure previously provided
- reasons for any changes in standard hourly rates / fees earned since the previous period, such as increases in labour costs or higher level of discounting due to increased competition in the market
- changes to main area / ownership of business
- change to the currency used in your quoted price

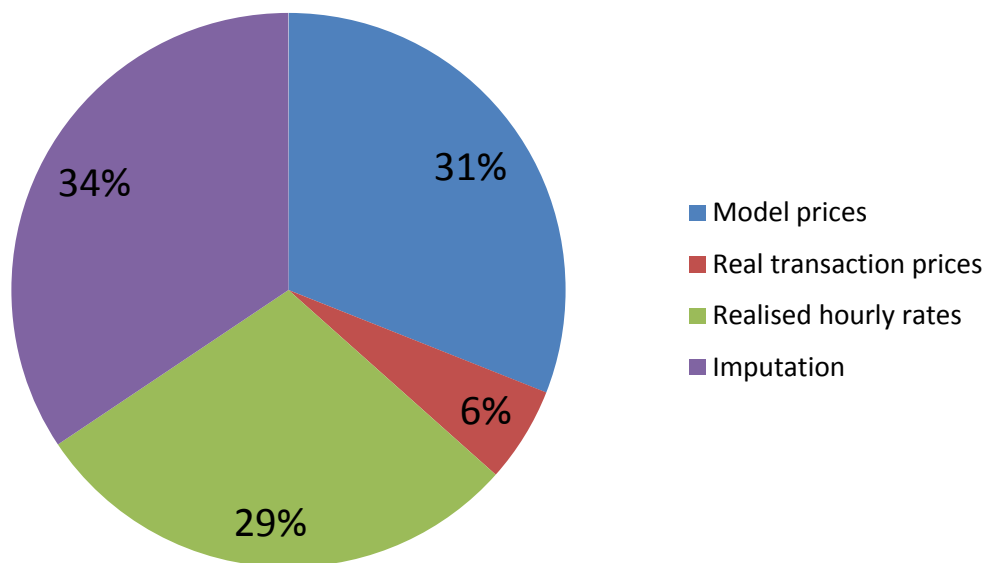
(Providing this additional information may eliminate the need for us to contact you later).

UK problems

- Mismatch between hours worked and hours billed
- Large numbers of staff grades
- Coverage of total fees charged
- Operational difficulties

Time based methods in Dutch SPPI

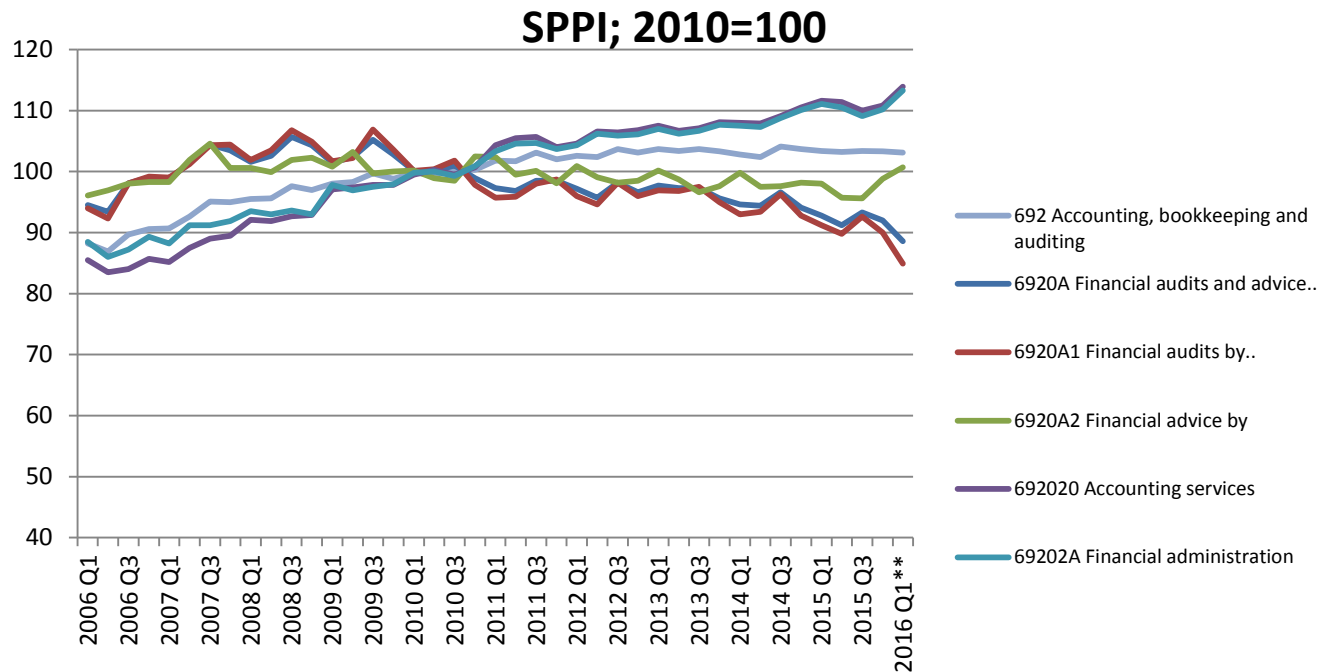
Methods in Dutch SPPI



Examples:

52.2 Support services for transportation
61 Telecommunications services
62 Computer programming, consultancy
69.2 Accounting, bookkeeping and auditing
70.2 Management consulting services
71.12 Engineering activities
73.1 Advertising services
78 Employment services

Example: 69.2 Accounting and bookkeeping



Problems in practice:

- Mixes of functions etc.
- Improper seasonality
- Productivity issues
- Businesses shifting to other models

Example: 69.2 Accounting and bookkeeping

Tax offices:

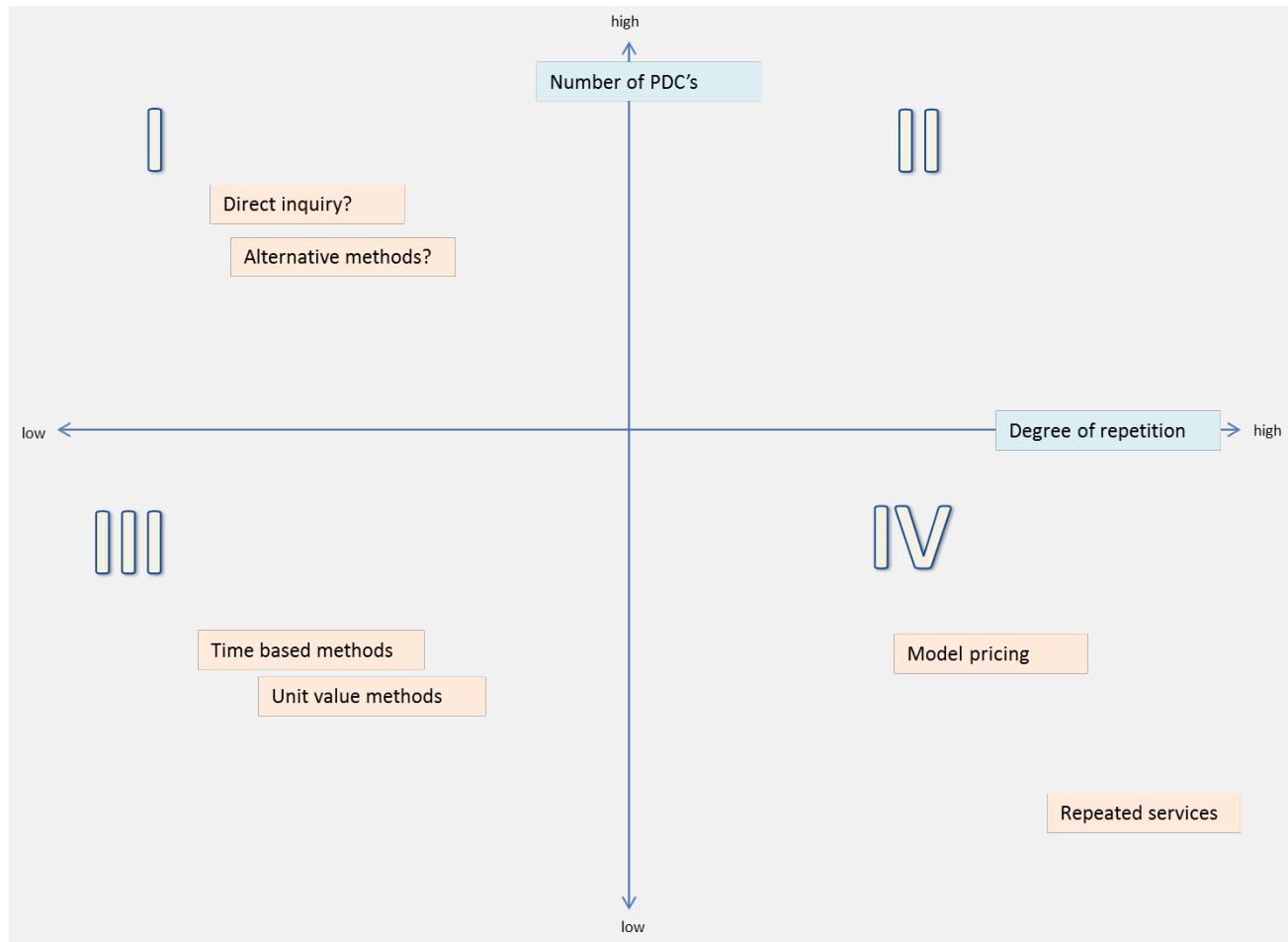
- CBS contacted an umbrella organisation (Dutch Association for Administration and Tax Offices, NOAB)
- NOAB conducted an own yearly questionnaire on basis of hourly rates, but has stopped doing this
- Reasons: tax offices are shifting to other activities (e.g. consultancy)
- Billing not based on hours worked but e.g. on subscriptions or 'value pricing'

Conclusion: realised hourly rates do not seem to work anymore and we have to look for alternatives

Alternatives

- Obvious choices for alternatives (but in most cases not available in practice):
 - Real transaction prices
 - Model prices
 - Unit values
- Less obvious alternatives (to be discussed in poster session later this week):
 - Direct inquiry
 - Other alternatives

Methods matrix



Discussion

- Small group discussion – 15-20 mins
- Spokesperson – feeds back to whole group afterwards
- Questions to discuss:
 - Are time-based methods fit for purpose?
 - Do you have any different problems with time-based methods?
 - Do you have any ideas on how to adapt methods to overcome these problems?
 - What pricing method would you use for the Dutch Tax offices?!