a volume index for the output of the banking industry

a pilot study for 1987-1995

introduction

- background of the project
- former method for banking
- new method for banking
- results
- (tentative) conclusions

volume measures services

background of the project

- US Boskin report (quality bias, services bias, substitution bias)
- Stability and Growth Pact (real GDP and excessive deficits)
- EU-Commission Decision 1998 (A, B and C methods; input methods are C methods for market services)
- turning point inflation/deflation in a number of industries?
- ‘New economics’
- internal quality project of the NA department

volume measures services

research program EU

- targets

  improvement of deflating methods
  harmonisation of deflating methods

- task forces:
  (1998) health, education, other non-market services
  (1999) computers and software, construction, large equipment, bank and insurance services, business services

volume measures services

- research program CBS
  - bank services
  - insurance services
  - health
  - transport
  - business services
- co-operation CBS - Erasmus University Rotterdam
  - consumer durables (cars)
  - trade services (margins)

volume measures bank services

former deflation method banking sector

- **input method (C method):**
  volume change output value = volume change intermediate consumption plus volume change labour costs
- **main disadvantages:**
  - deflation of inputs and outputs not independent of each other
  - probably an underestimation of the volume change of output and of labour productivity

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new deflation method banking sector (1)

- output of bank services = interest margin (FISIM) + commissions
- deflation of commissions with deflators for comparable business services
  (for the time being partially with wage rates)
- breakdown of FISIM according to main activities (credit granting, savings, transfers of payments) and a further breakdown in partial activities

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new deflation method banking sector (2)

- selection of appropriate (available) volume indicators for each partial activity
- ‘straight forward aggregate weighting’ or ‘influence weighting’
- sensitivity analysis of the weighting scheme in connection with ‘expert guesses’

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new deflation method banking sector (3)

- **example**
  - **credit granting (0.20)**
    - **mortgages (0.50)**
      - **administration running mortgages (0.70)**
        - **number of mortgages (f=1) and average value of mortgages (f=0.1)**
- **problem: weighting scheme (expert guesses)**
- **sensitivity analysis: weights for the main activities!**
- **note: commissions (5 activities)**

results for labour productivity

	old	new	diff.
1988	1.2	-0.2	-1.4
1989	0.0	3.2	+3.2
1990	-0.4	-2.9	-2.5
1991	1.2	1.6	+0.4
1992	0.8	5.2	+4.4
1993	1.7	8.1	+6.4
1994	1.7	7.4	+5.7
1995	1.6	3.1	+1.5
1996	1.5	4.0	+2.5
1997	3.1	1.6	-1.5

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advantages output method

- **meets standards Commission Decision 1998**
- **efficient use of all kinds of available data on the banking sector**
- **plausible description of real volume changes of output, value added and labour productivity**

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(tentative) conclusions

- **the ‘new’ output method is methodologically superior to the ‘old’ input method and meets the standards of the 1998 Commission Decision**
- **efficient use of all kinds of available data on the banking sector**
- **the results give a better reflection of the ‘real’ world**
- **the implementation of the new method can be improved, e.g. the weighting scheme (negotiations with the Dutch banking sector on accounting data)**

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'straight forward aggregate weighting'

$$IndVol = \sum_{i=1}^{n} w(i).Ind\ A(i)$$

A(i) = a volume indicator which describes aspect i of a service,

w(i) = the weight of aspect i for the determination of volume changes

$\Sigma w(i) = 1$

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‘influence weighting’

$$Ind\ Vol = \prod_{i=1}^{n} \{1 + f(i).[Ind\ A(i) - 1]\}$$

A(i) = a volume indicator which describes aspect i of a service

f(i) = a parameter reflecting the influence of A(i) on the volume index

0 ≤ f(i) ≤ 1