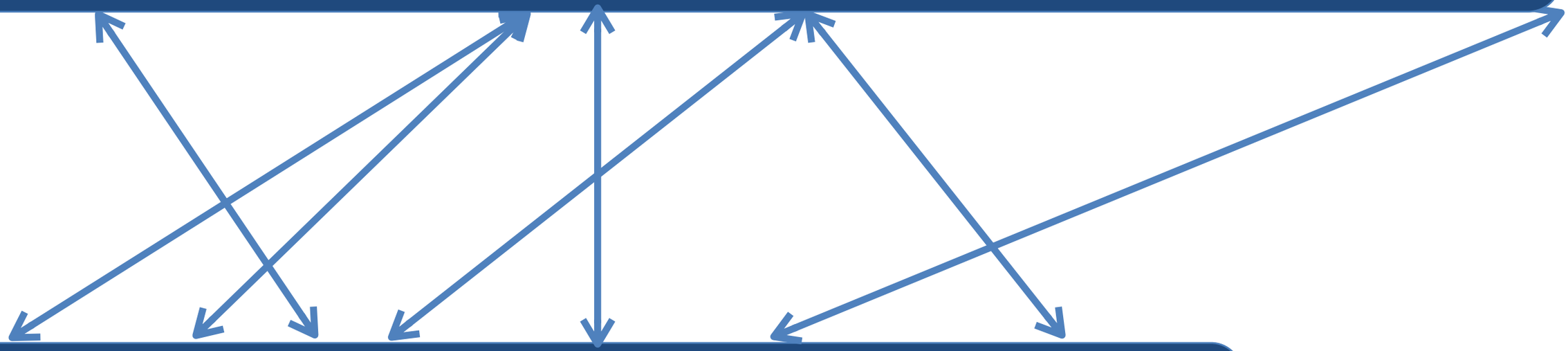
u unemployed workers



v vacancies

u unemployed workers

h newly employed workers

CRS matching function: $h=h(u,v)$

h newly filled jobs

v vacancies

tightness: $\theta = v / u$

u unemployed workers

job-finding probability:

$$f(\underset{+}{\theta}) = h/u = h(1, \theta)$$

CRS matching function: $h=h(u,v)$

vacancy-filling probability:

$$q(\underset{-}{\theta}) = h/v = h(1/\theta, 1)$$

v vacancies

$1 - u_t$ employed workers

u_t unemployed workers

$$f(\theta_t) \times u_t$$

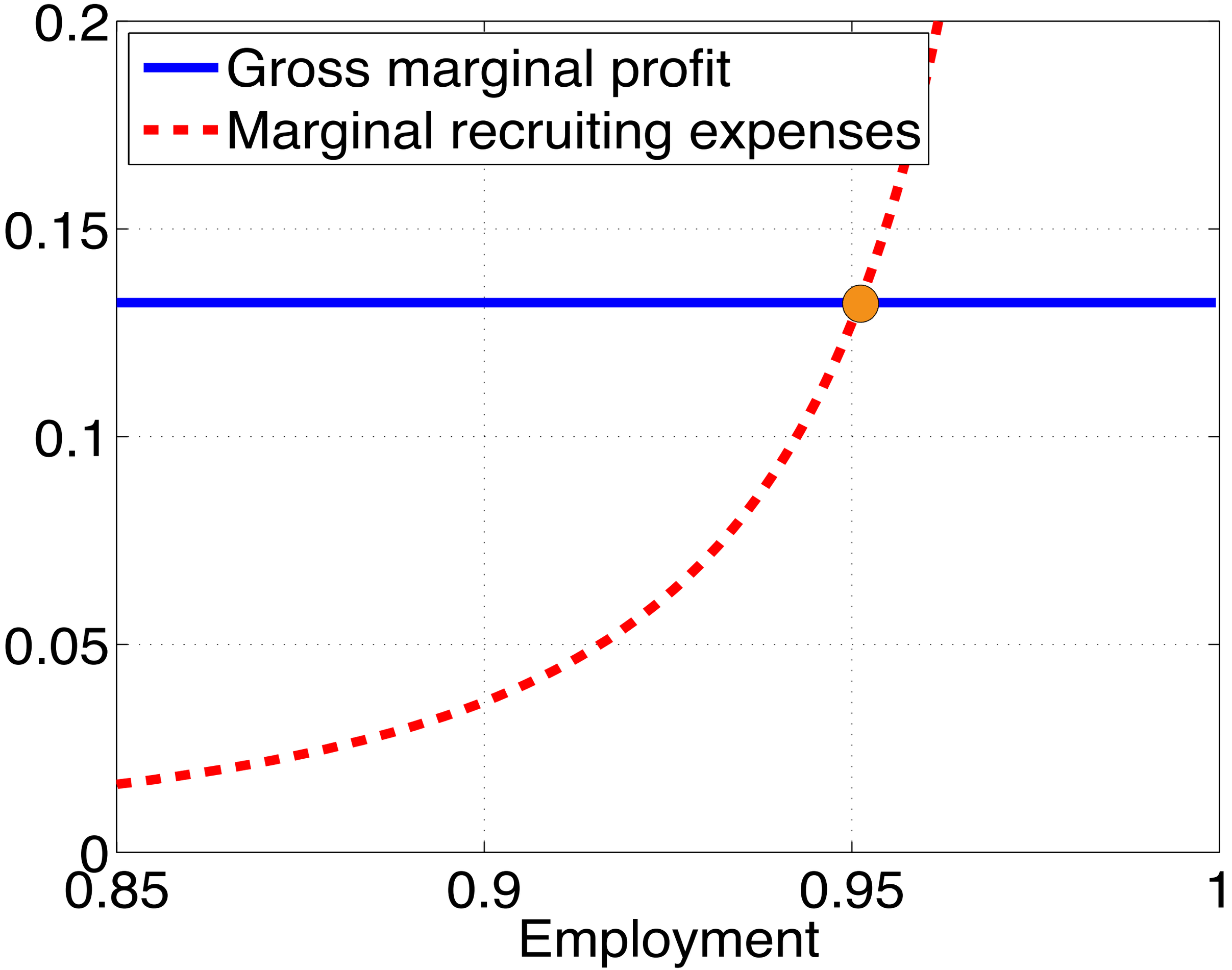
n_t employed workers

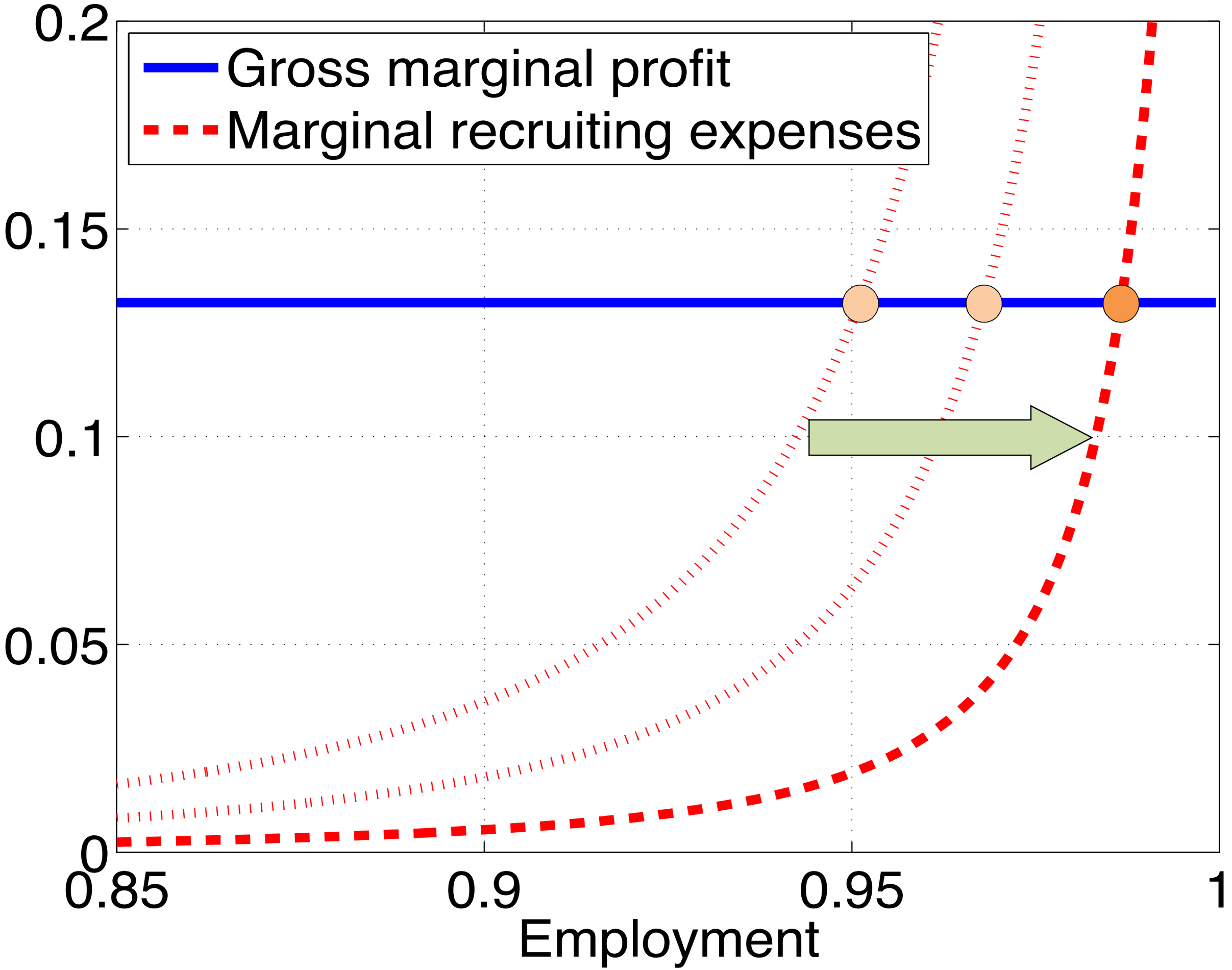
u_t unemployed workers

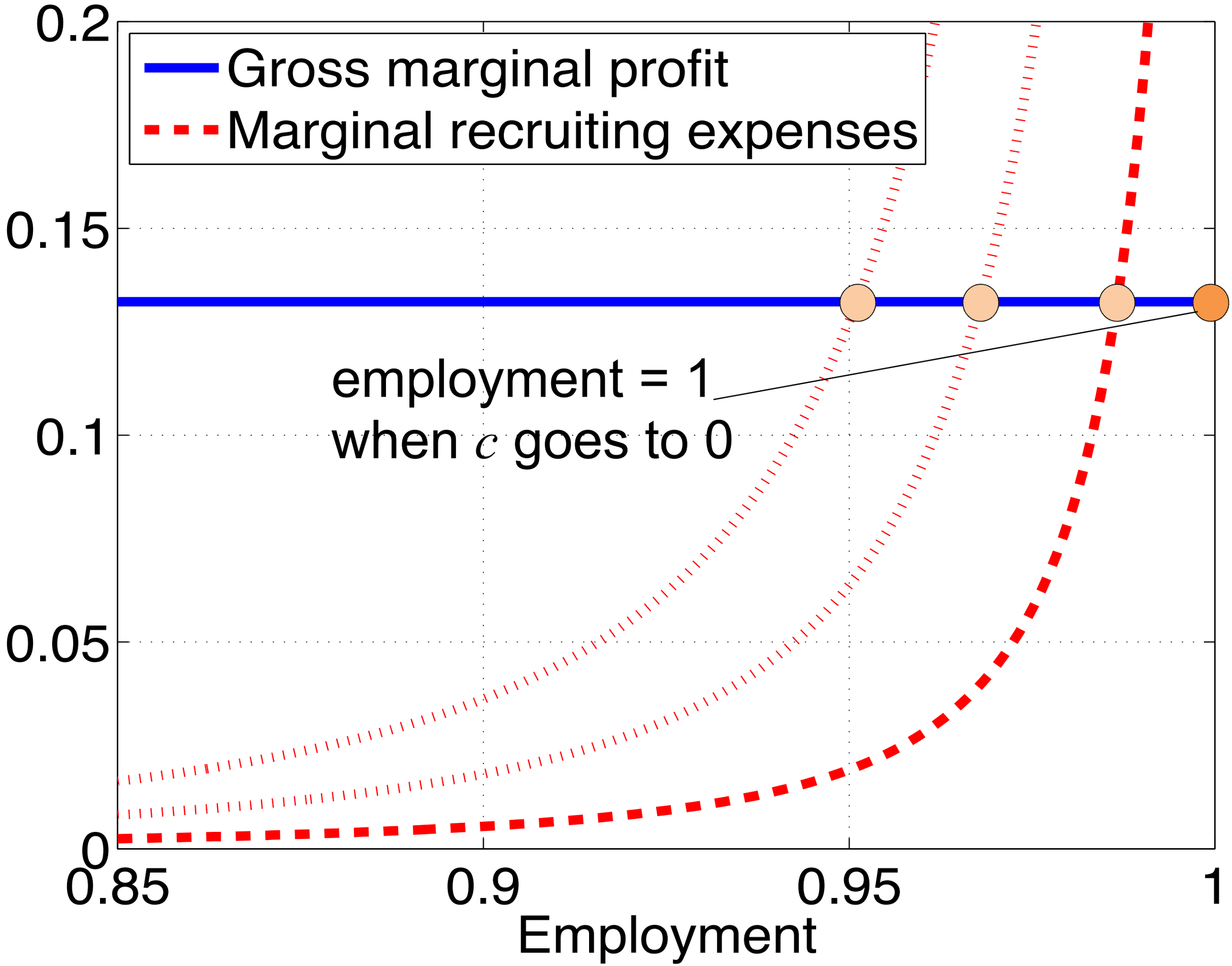
n_t employed workers

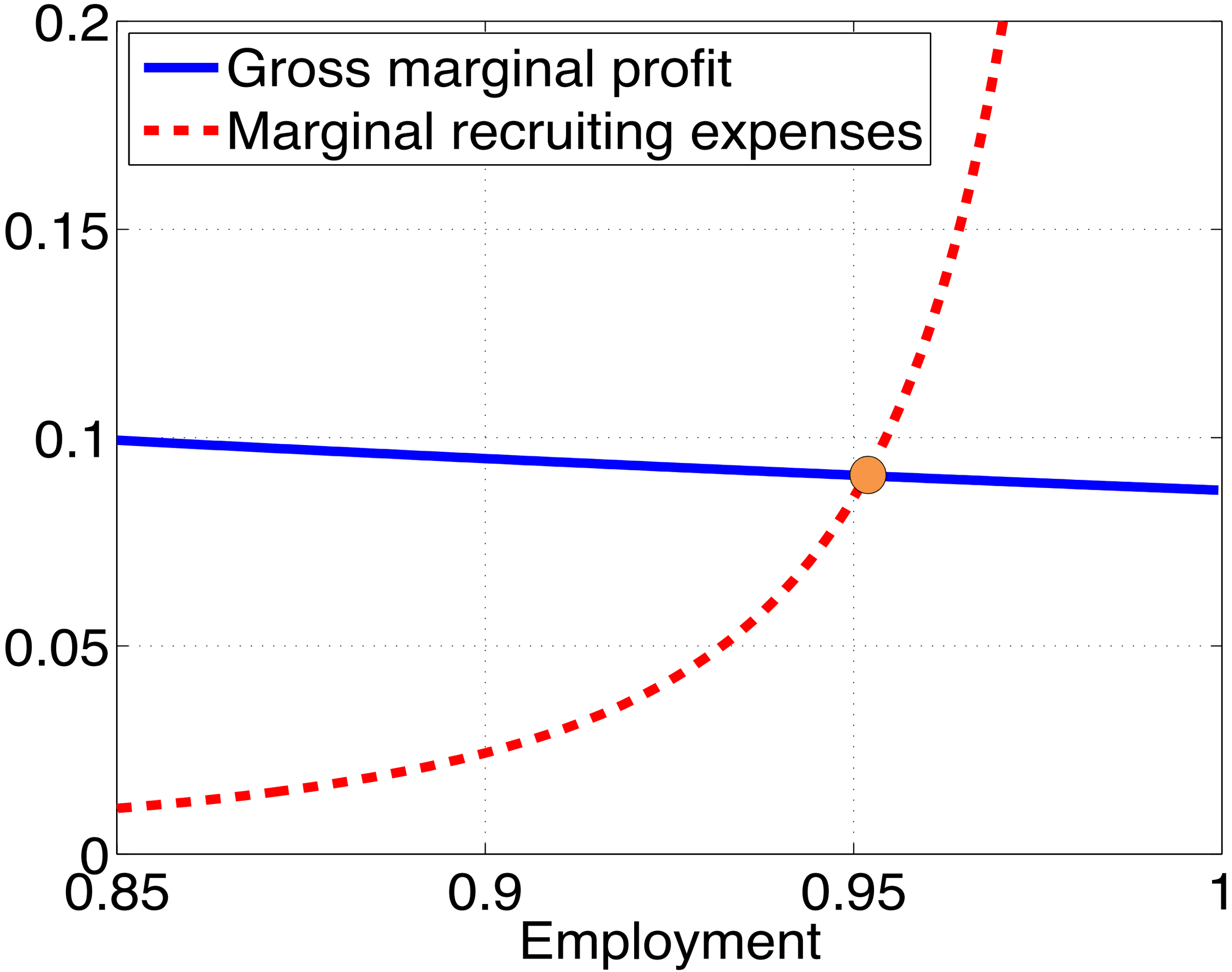
u_{t+1} unemployed workers

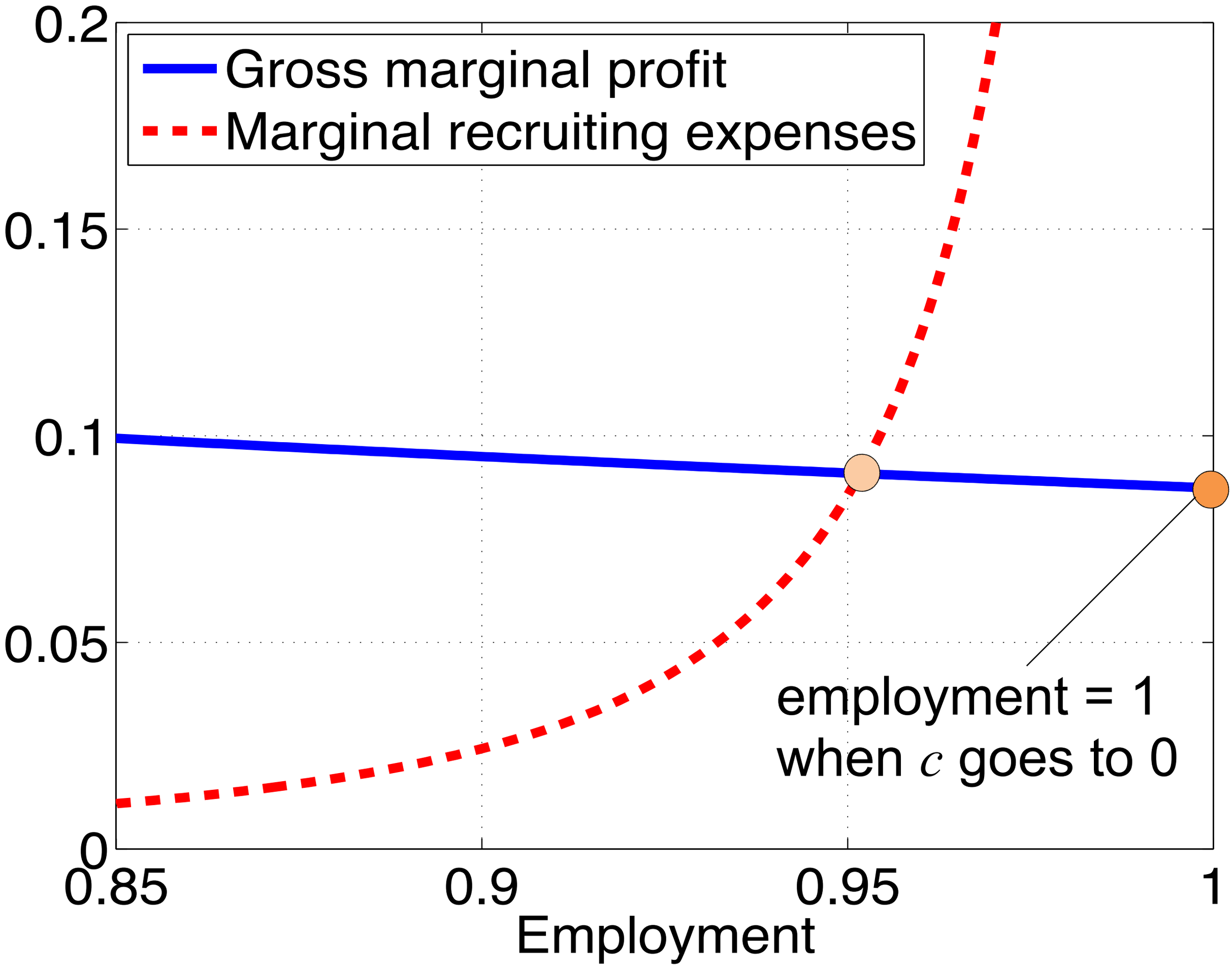
$-s \times n_t$

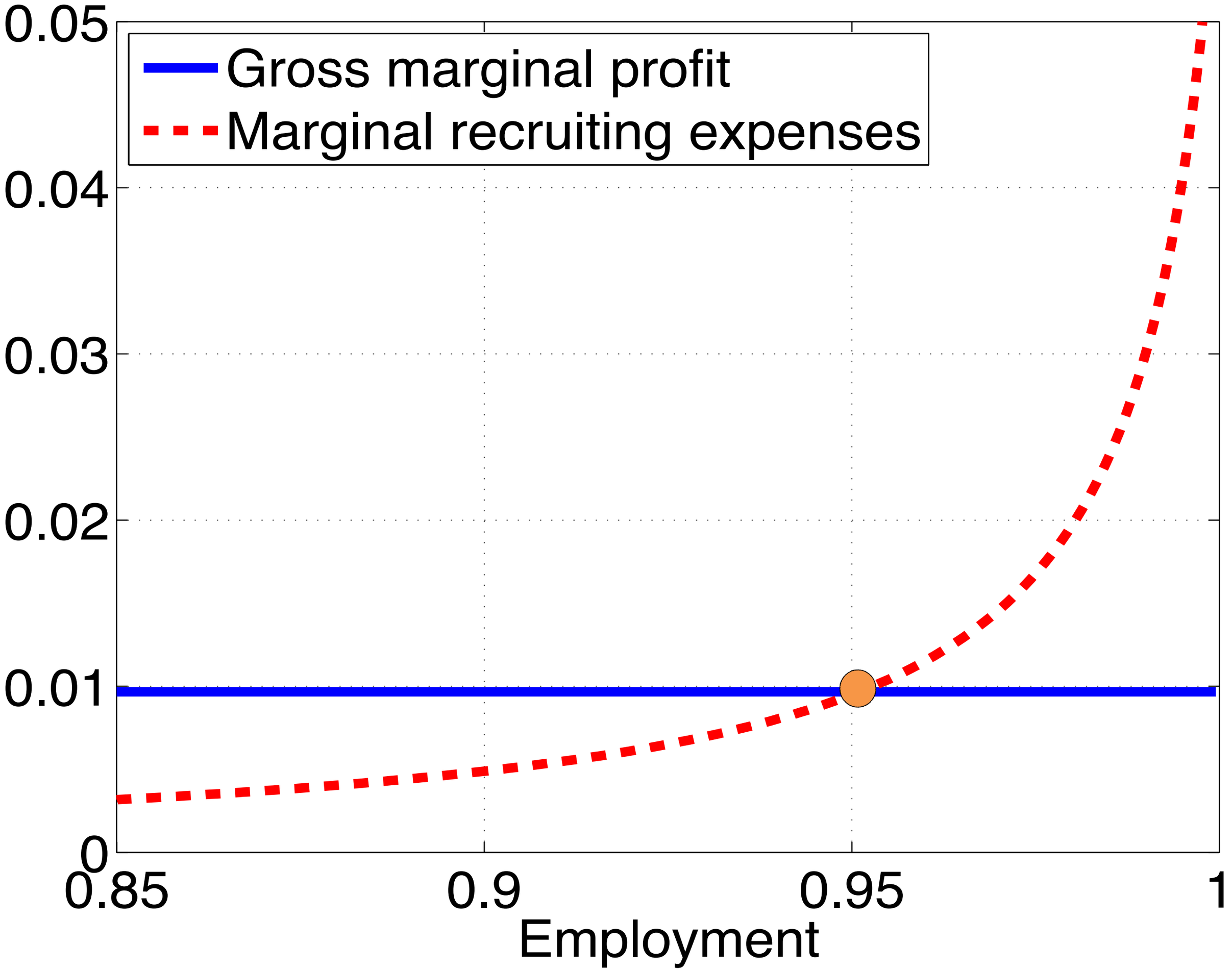

Gross marginal profit
Marginal recruiting expenses
0.2
0.15
0.1
0.05
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
0.2
0.15
0.1
0.05
0
0.85
0.9
0.95
1
Employment

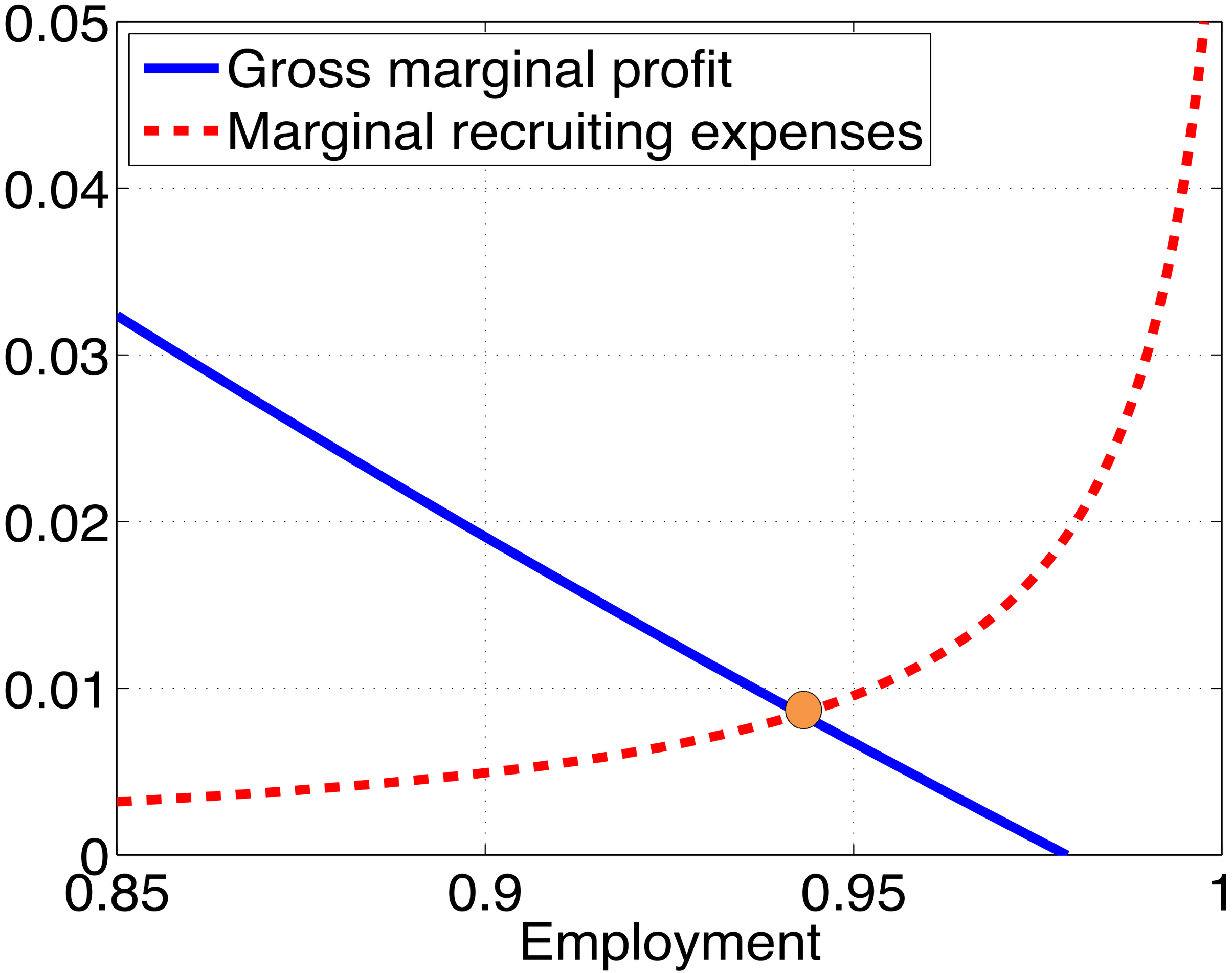

Gross marginal profit
Marginal recruiting expenses
employment = 1
when c goes to 0
0.2
0.15
0.1
0.05
0
0.85
0.9
0.95
1
Employment

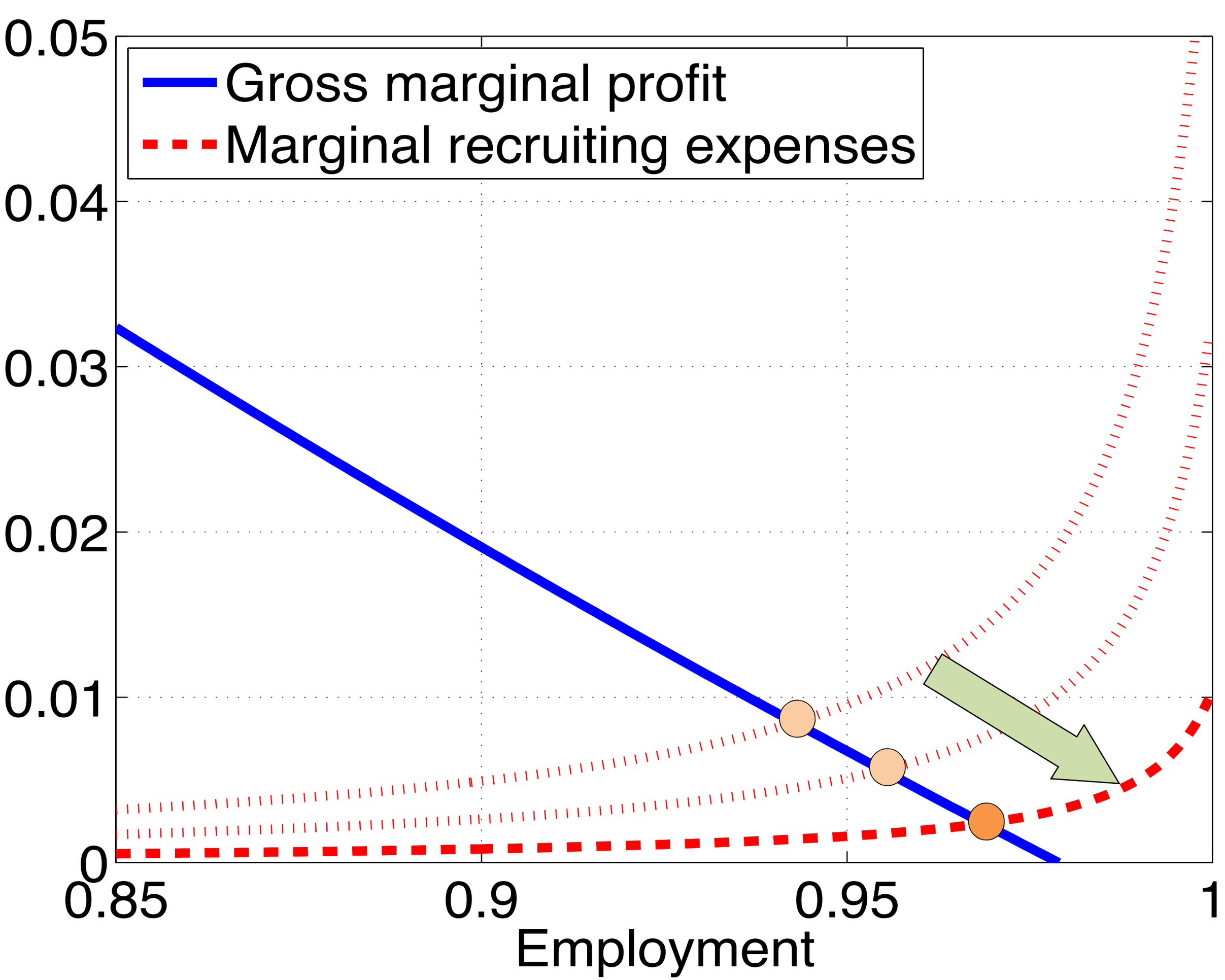

Gross marginal profit
Marginal recruiting expenses
0.2
0.15
0.1
0.05
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
0.2
0.15
0.1
0.05
0
0.85
0.9
0.95
1
Employment
employment = 1
when c goes to 0

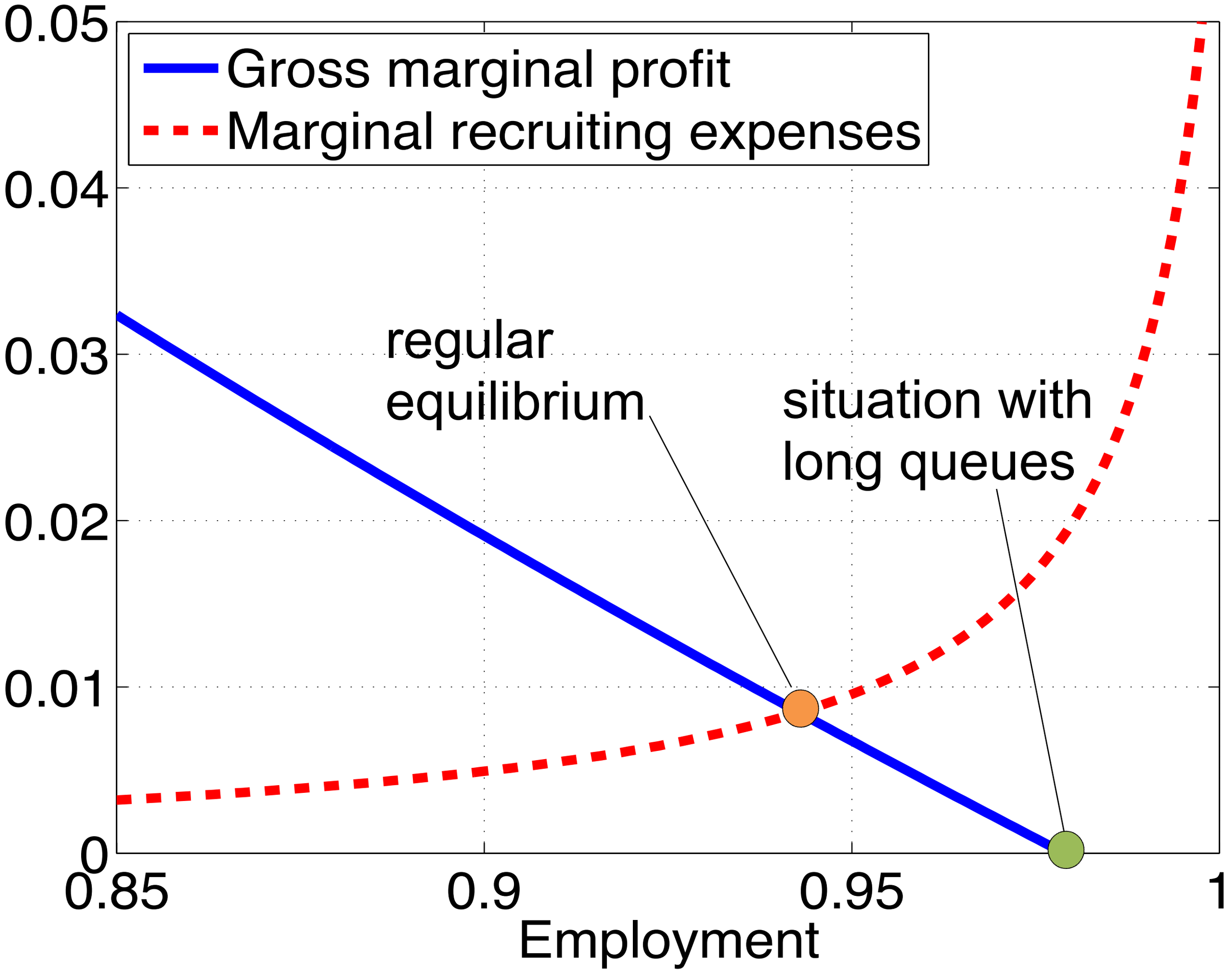

Gross marginal profit
Marginal recruiting expenses
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment

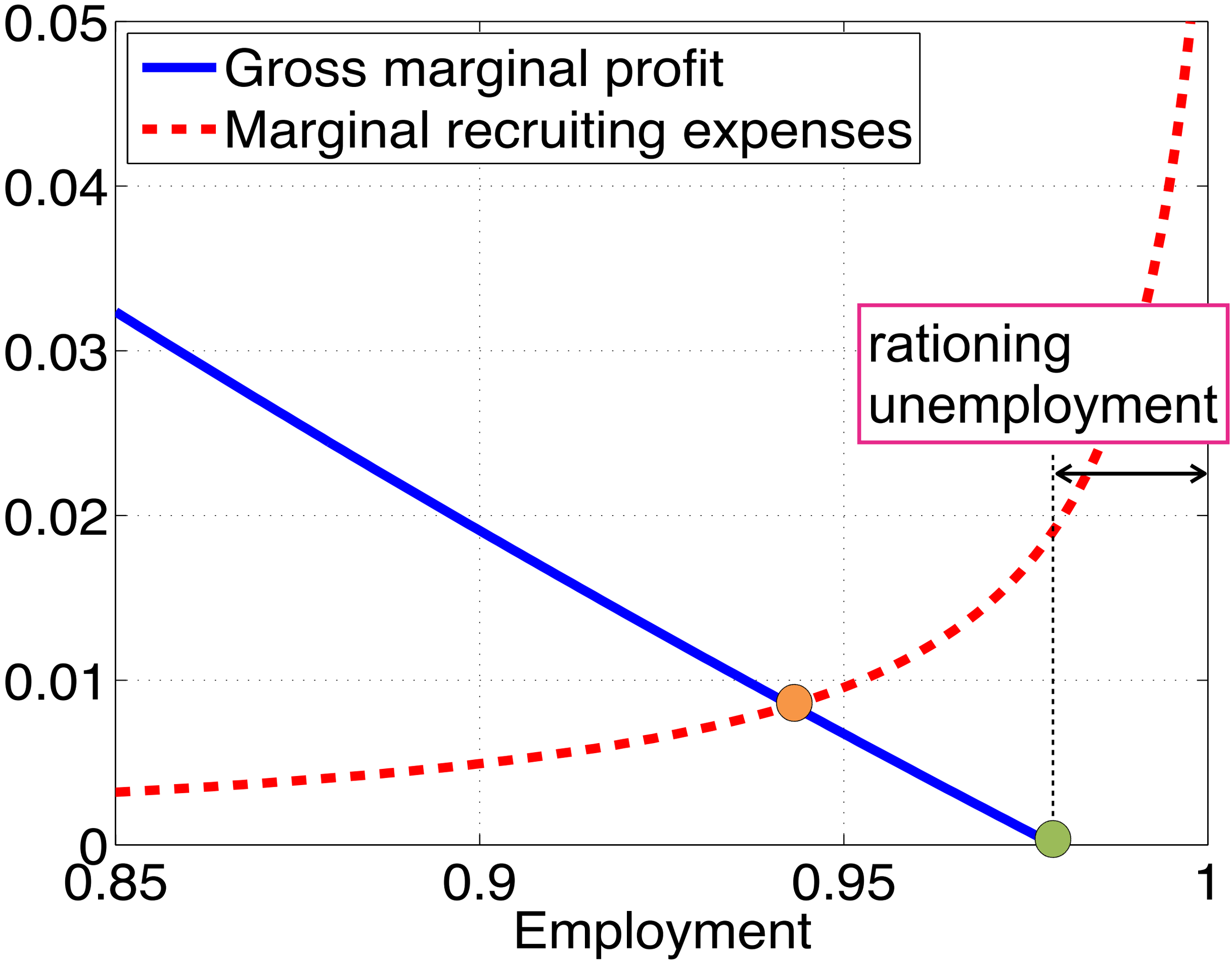
Gross marginal profit
Marginal recruiting expenses
employment = 1
when c goes to 0
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment

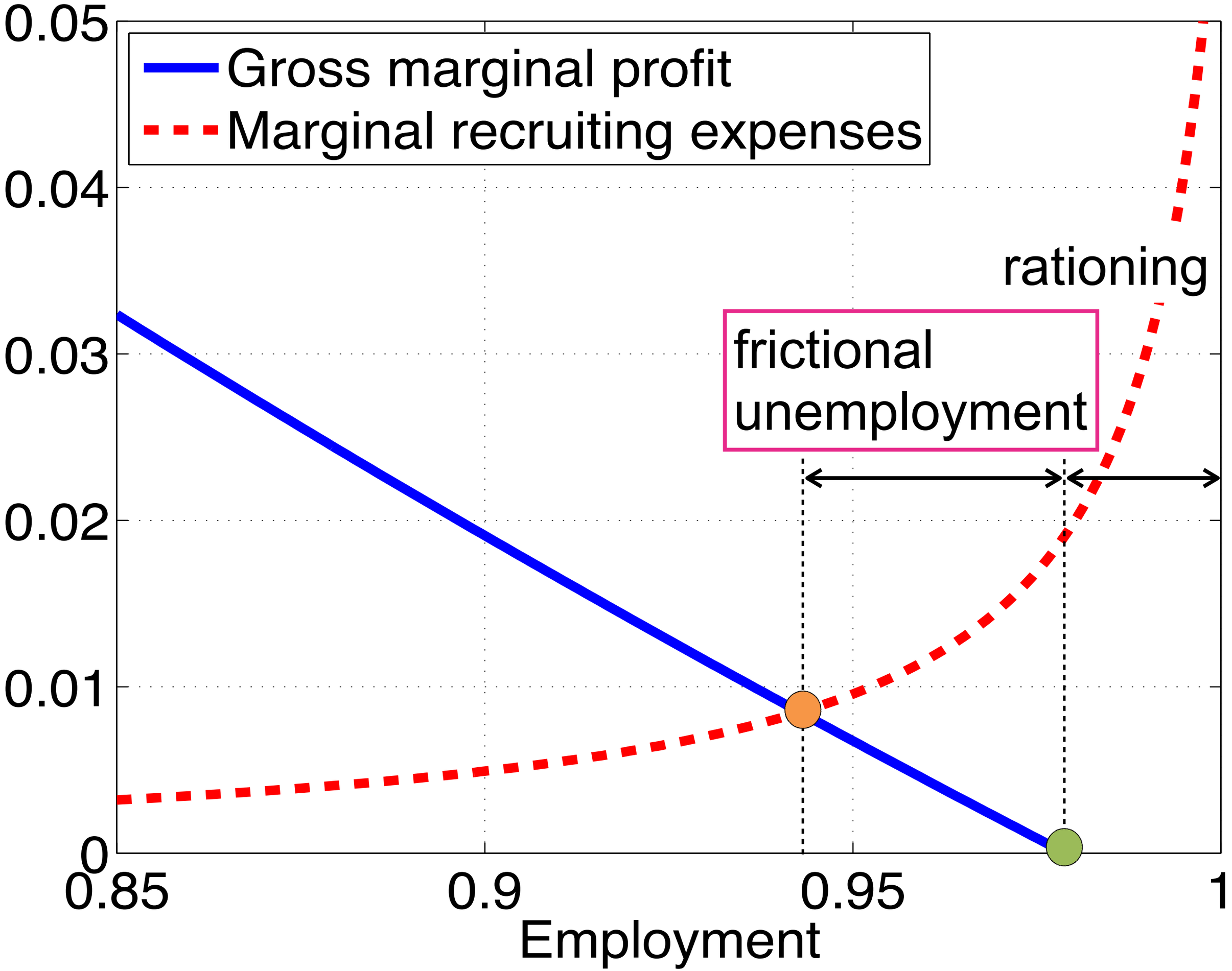

Gross marginal profit
Marginal recruiting expenses
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment

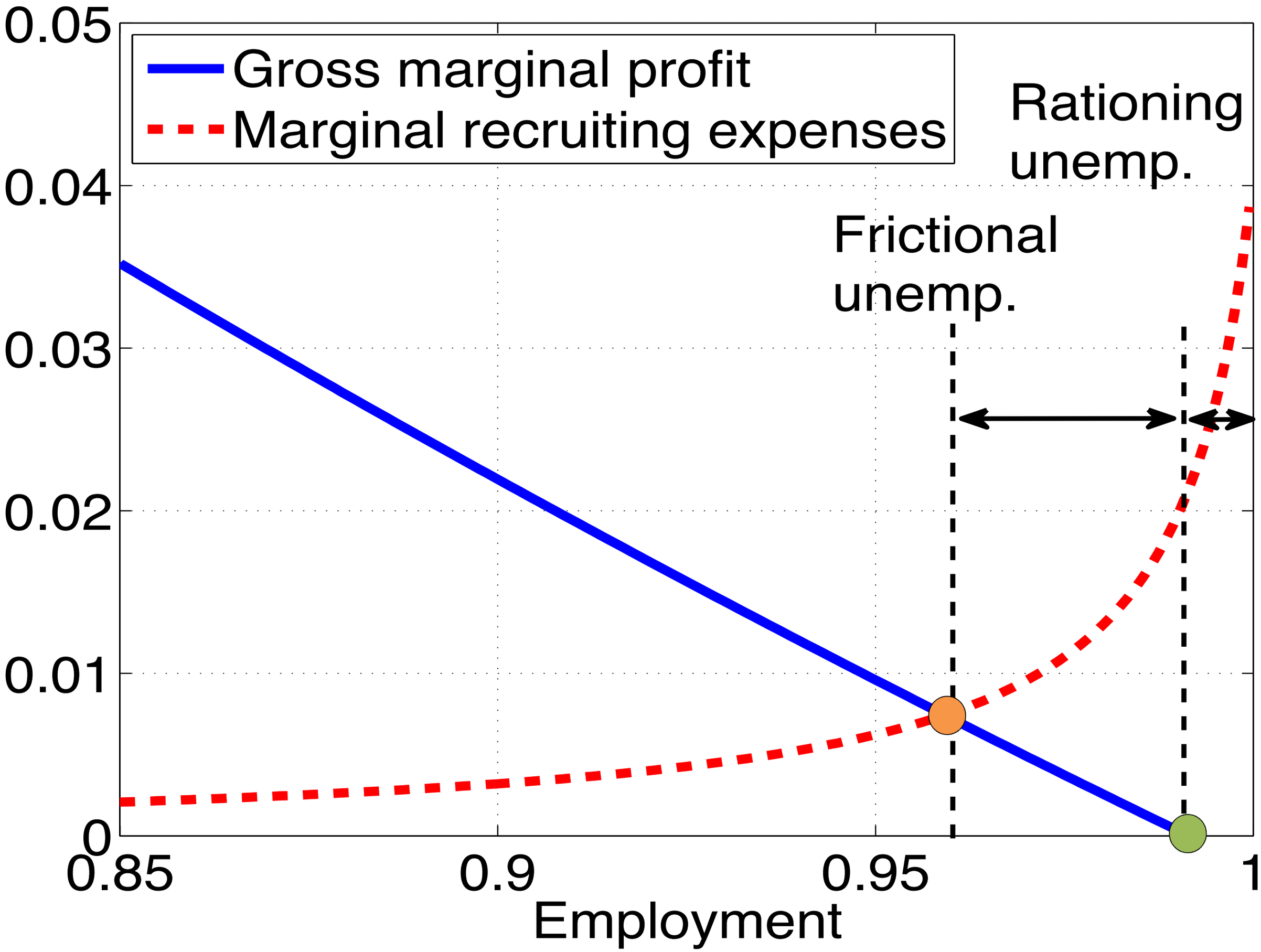

Gross marginal profit
Marginal recruiting expenses
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment

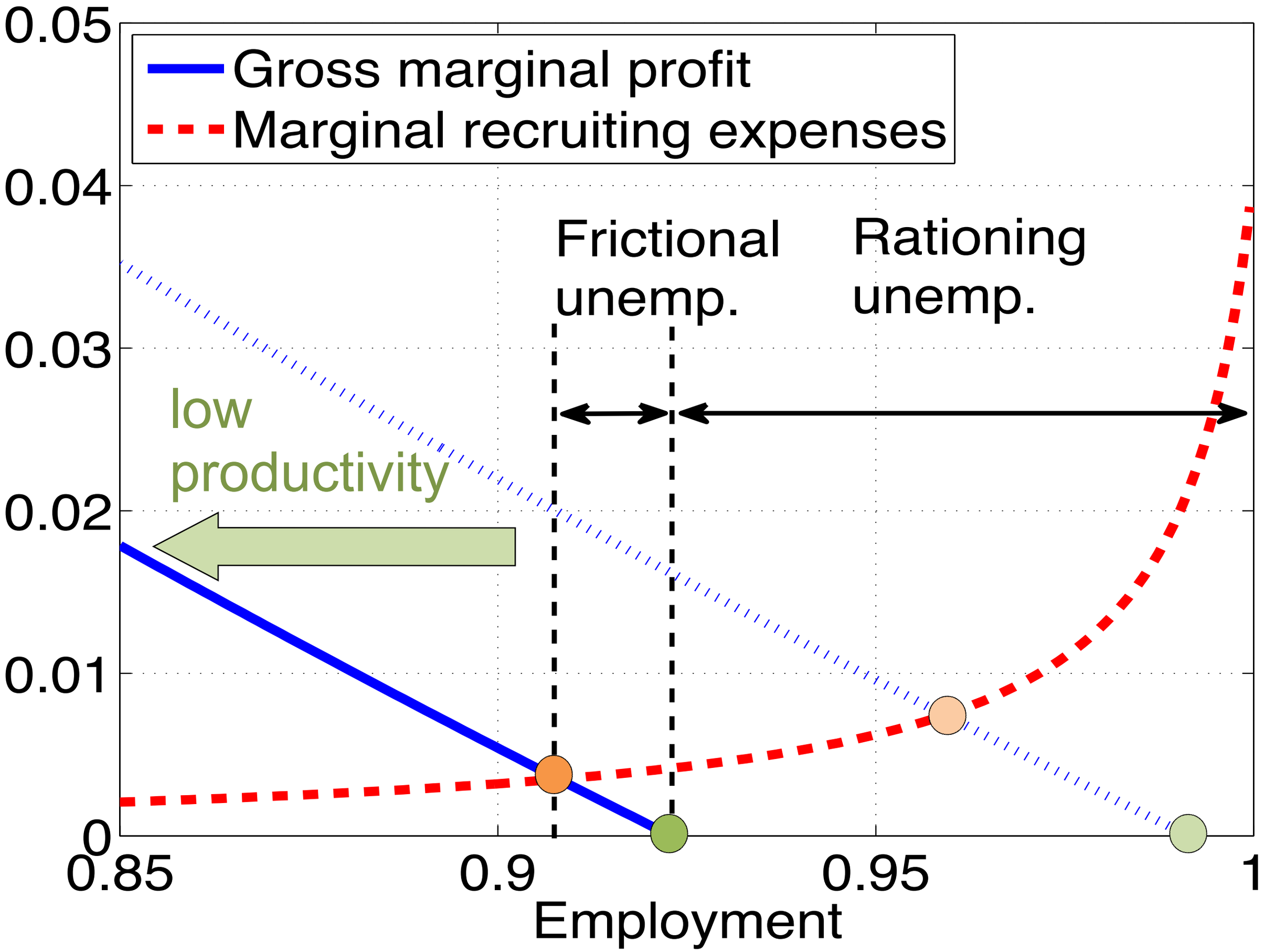
Gross marginal profit
Marginal recruiting expenses
employment < 1
when c goes to 0
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
regular
equilibrium
situation with
long queues
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
rationing
unemployment
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
rationing
frictional
unemployment
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
Rationing unemp.
Frictional unemp.
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment


Gross marginal profit
Marginal recruiting expenses
Frictional unemp.
Rationing unemp.
low productivity
0.05
0.04
0.03
0.02
0.01
0
0.85
0.9
0.95
1
Employment

Technology

0%
−0.5%
−1%

Output

0%
−0.5%
−1%

Wage

0%
−0.5%
−1%

Number of hires

0%
−5%
−10%

Vacancy–unemployment ratio

0%
−10%
−20%

Unemployment

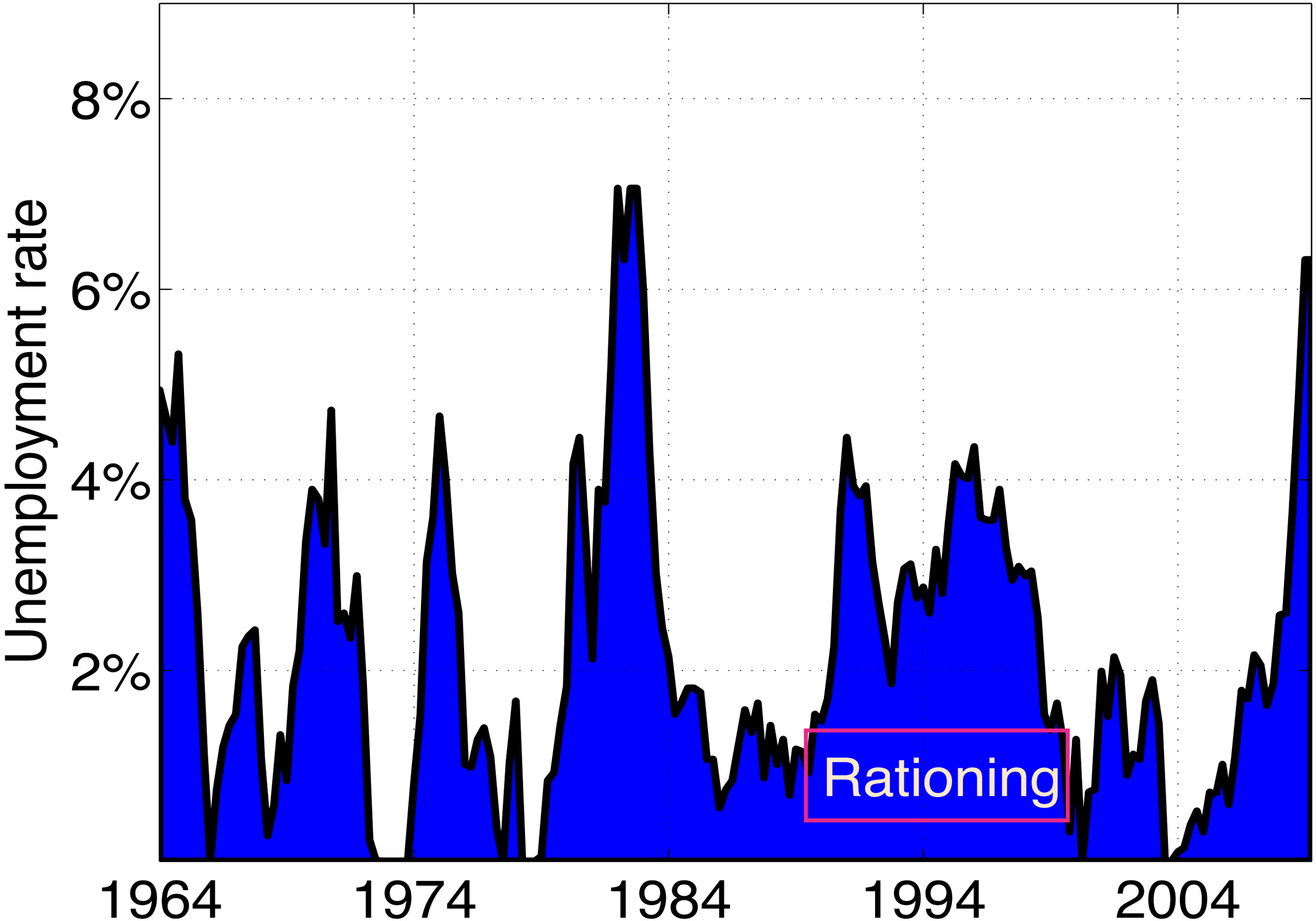
5%
0%

Rationing unemployment

40%
20%
0%
0
50
100
150
200
250
Weeks after shock

Frictional unemployment

0%
−10%
−20%
0
50
100
150
200
250
Weeks after shock


Unemployment rate
8%
6%
4%
2%
1964
1974
1984
1994
2004
Rationing

Unemployment rate

8%

6%

4%

2%

Frictional

Rationing

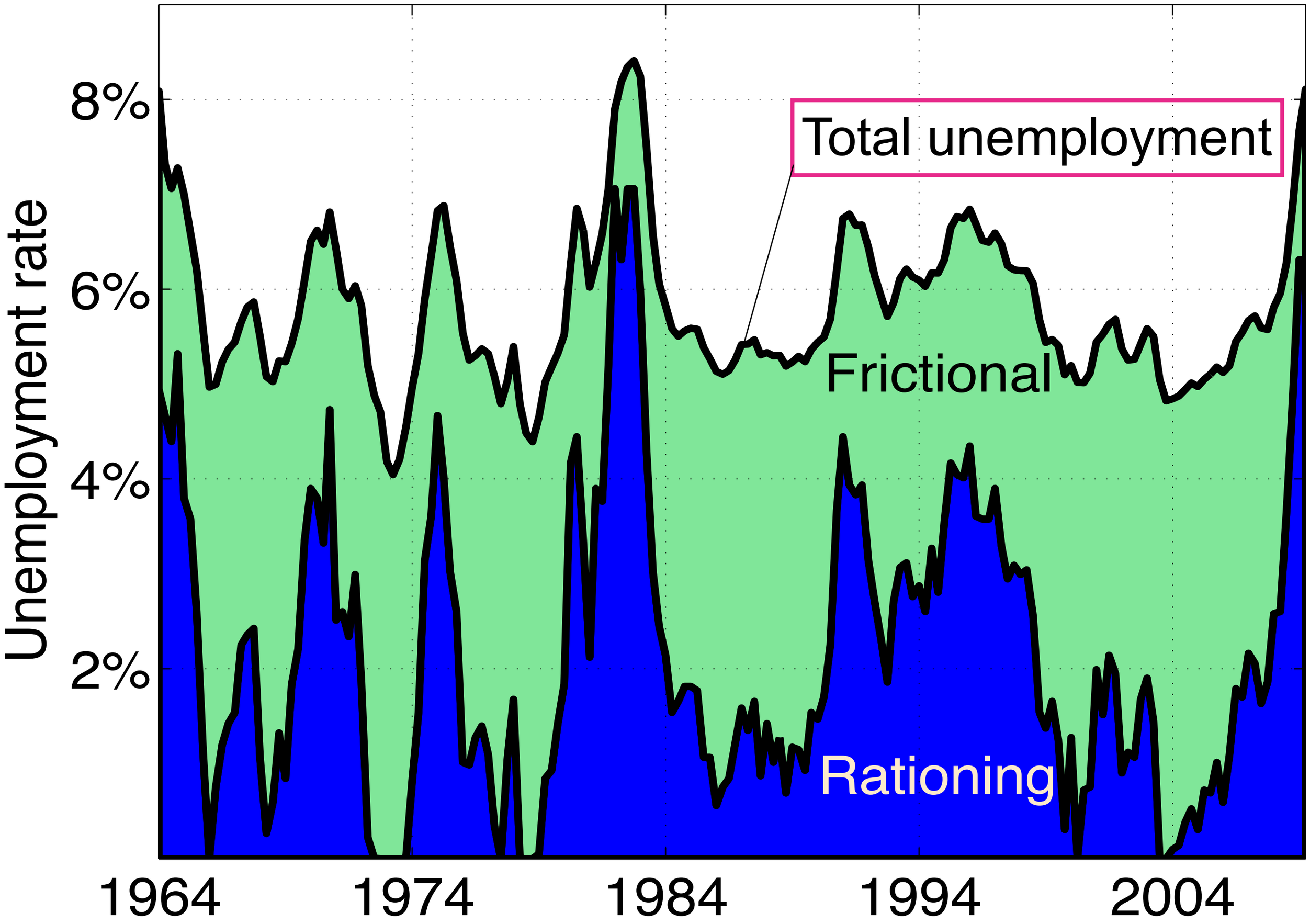
1964

1974

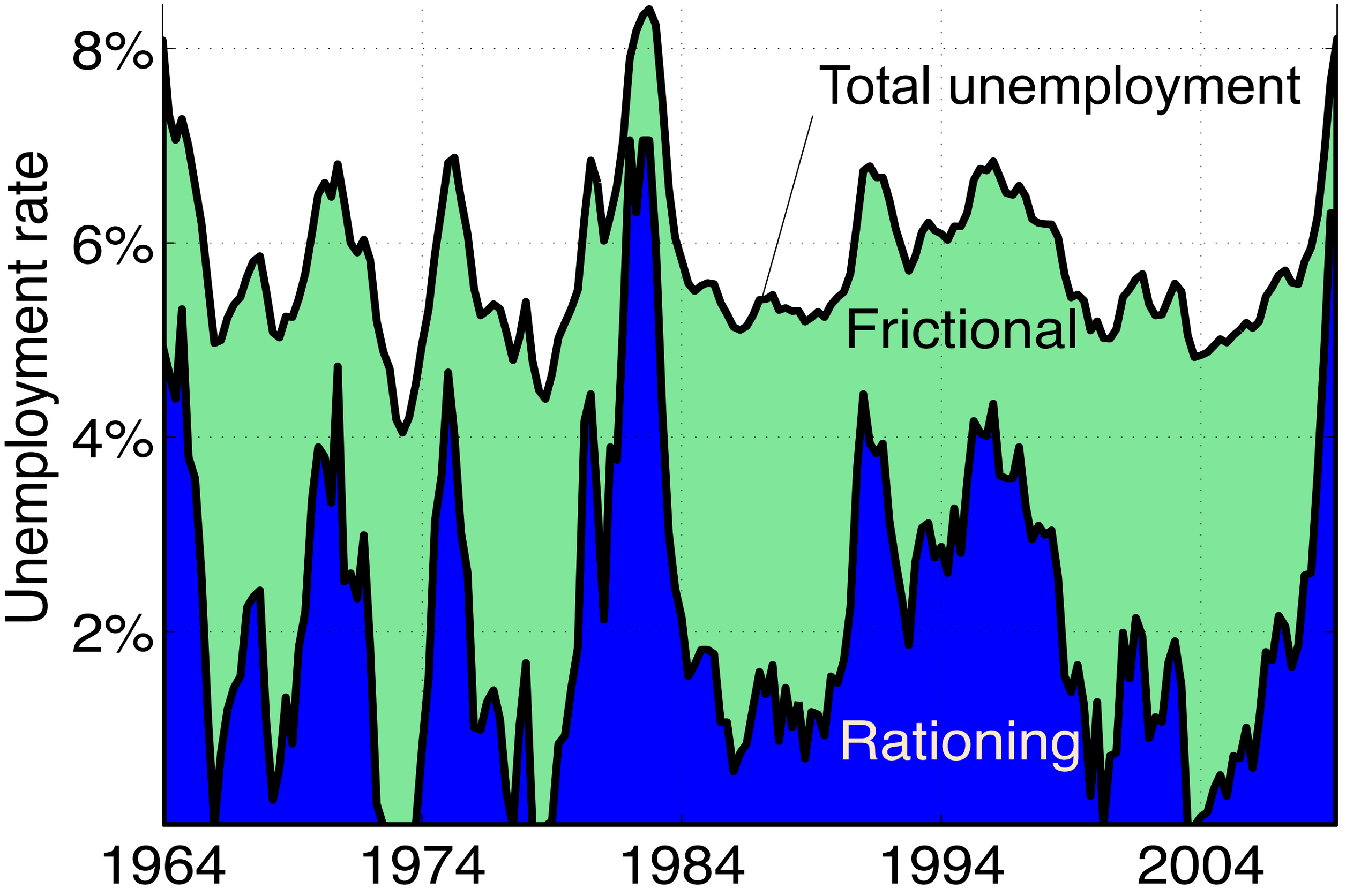
1984

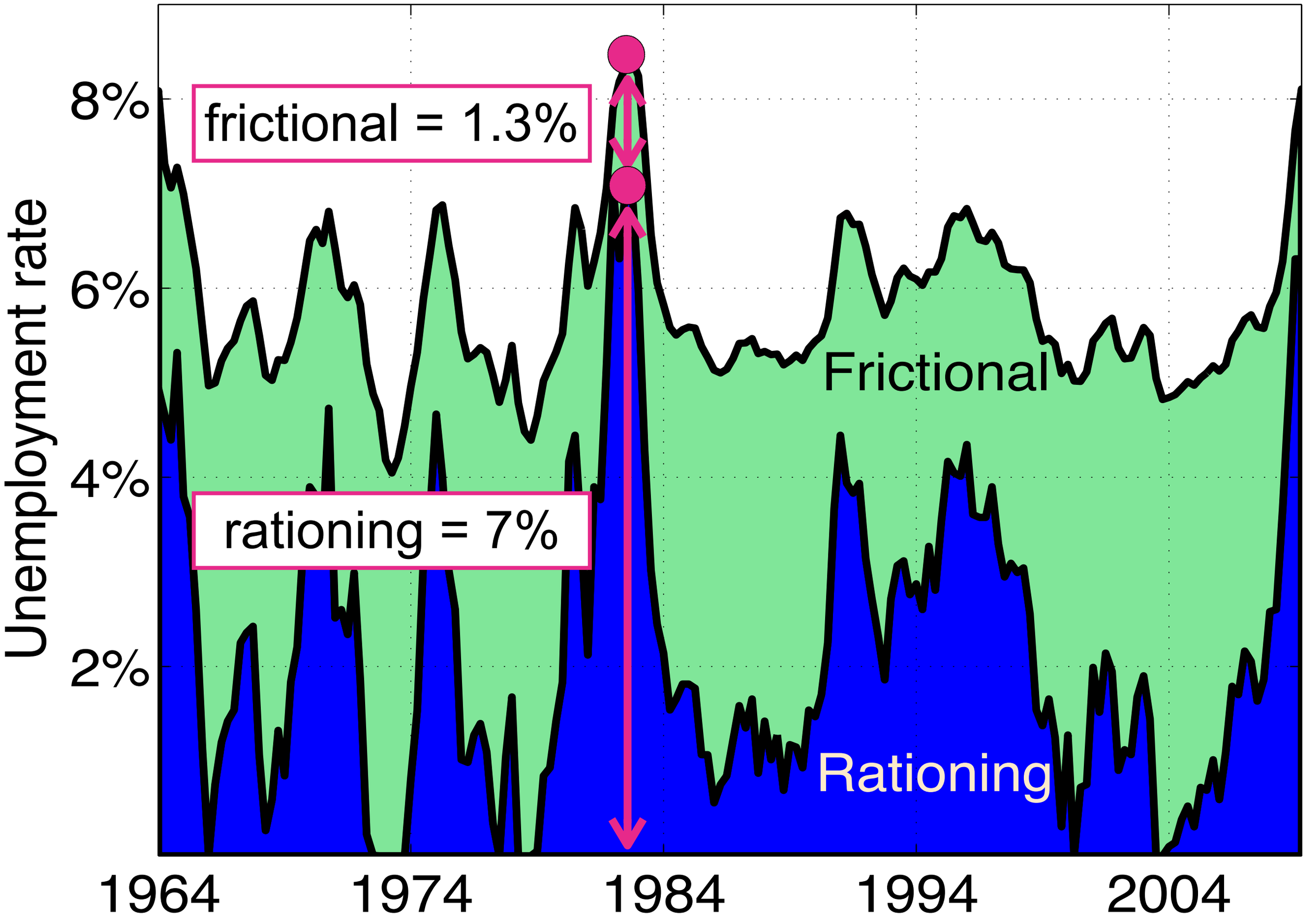
1994

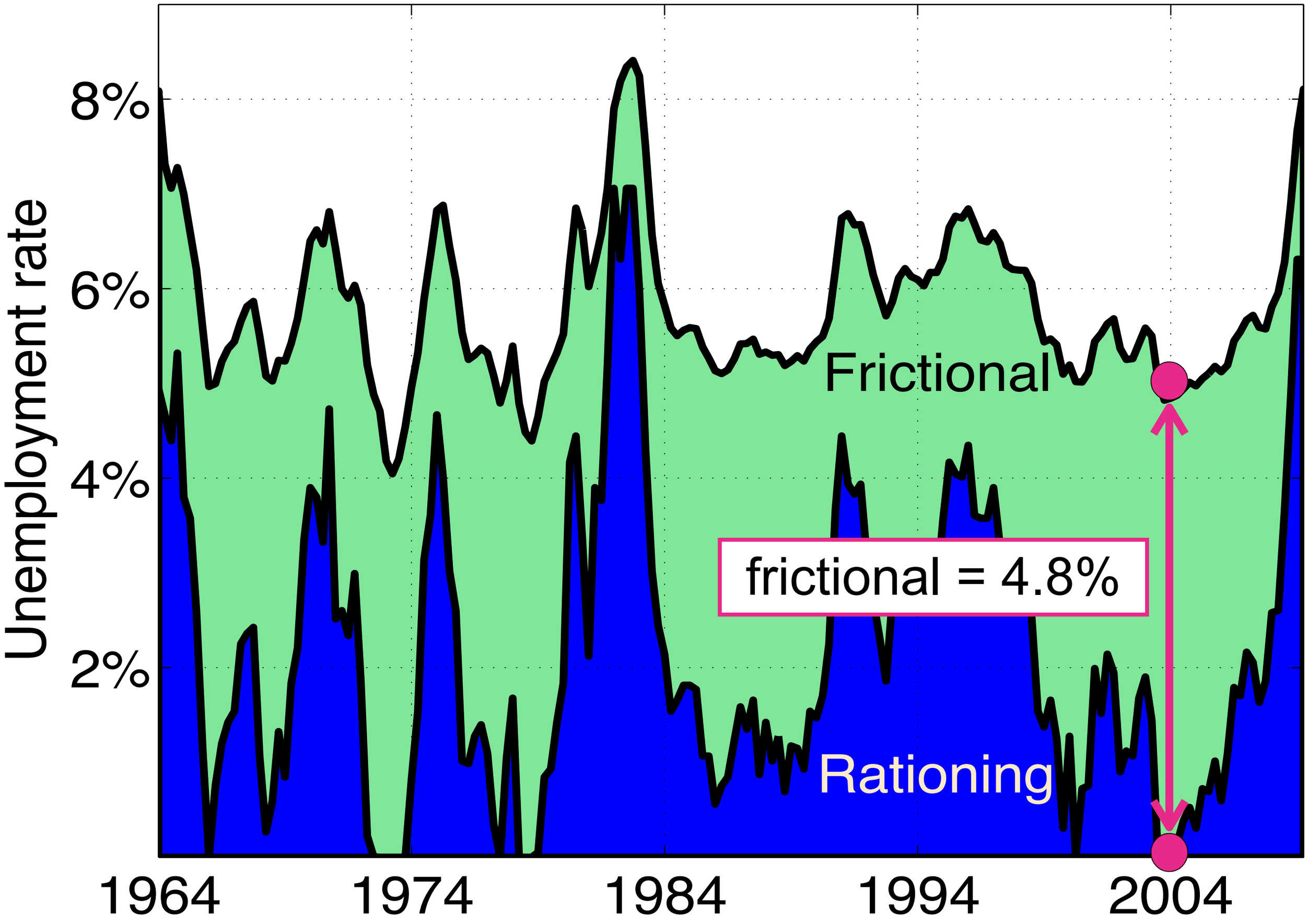
2004

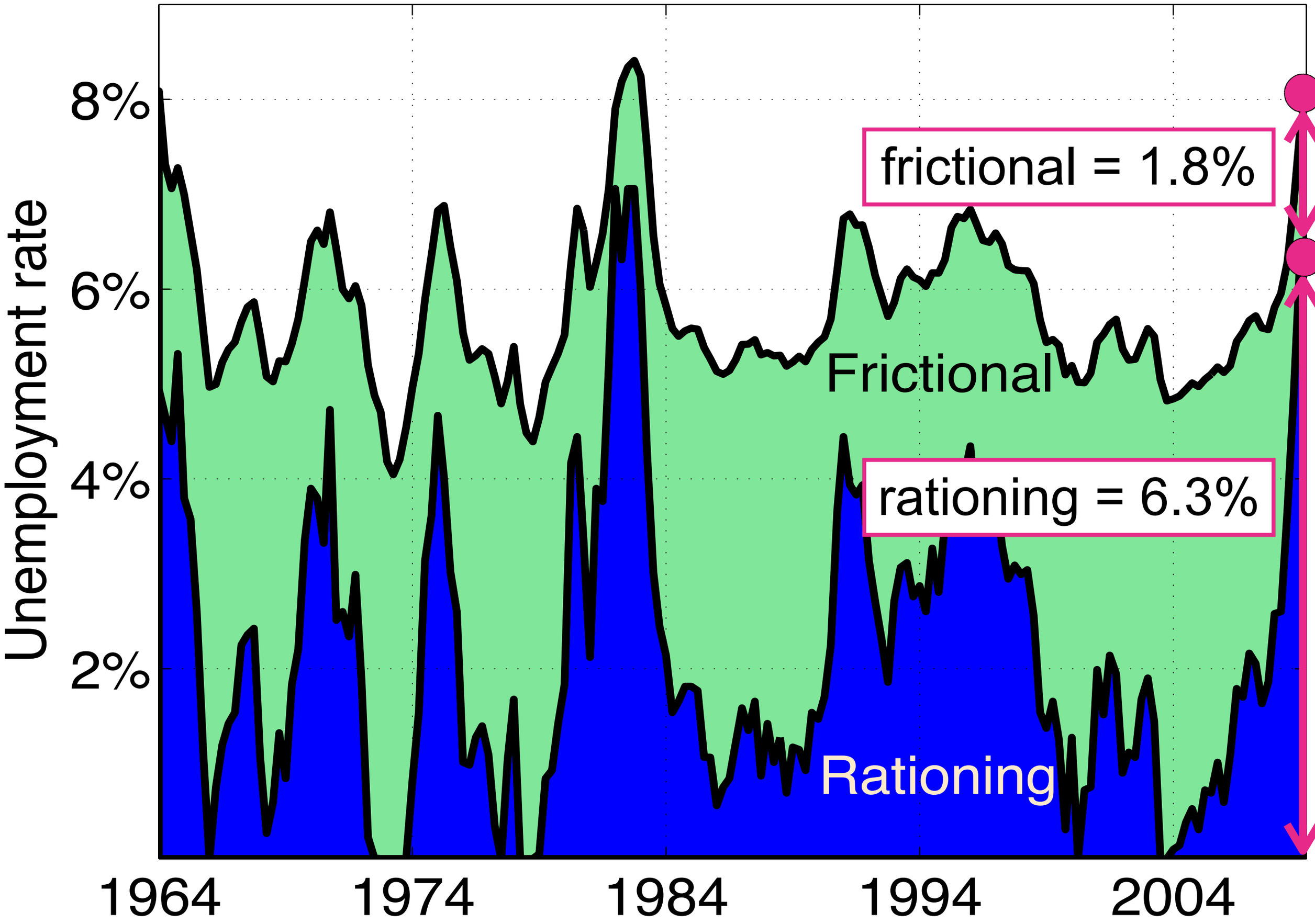

Unemployment rate
8%
6%
4%
2%
Total unemployment
Frictional
Rationing
1964
1974
1984
1994
2004

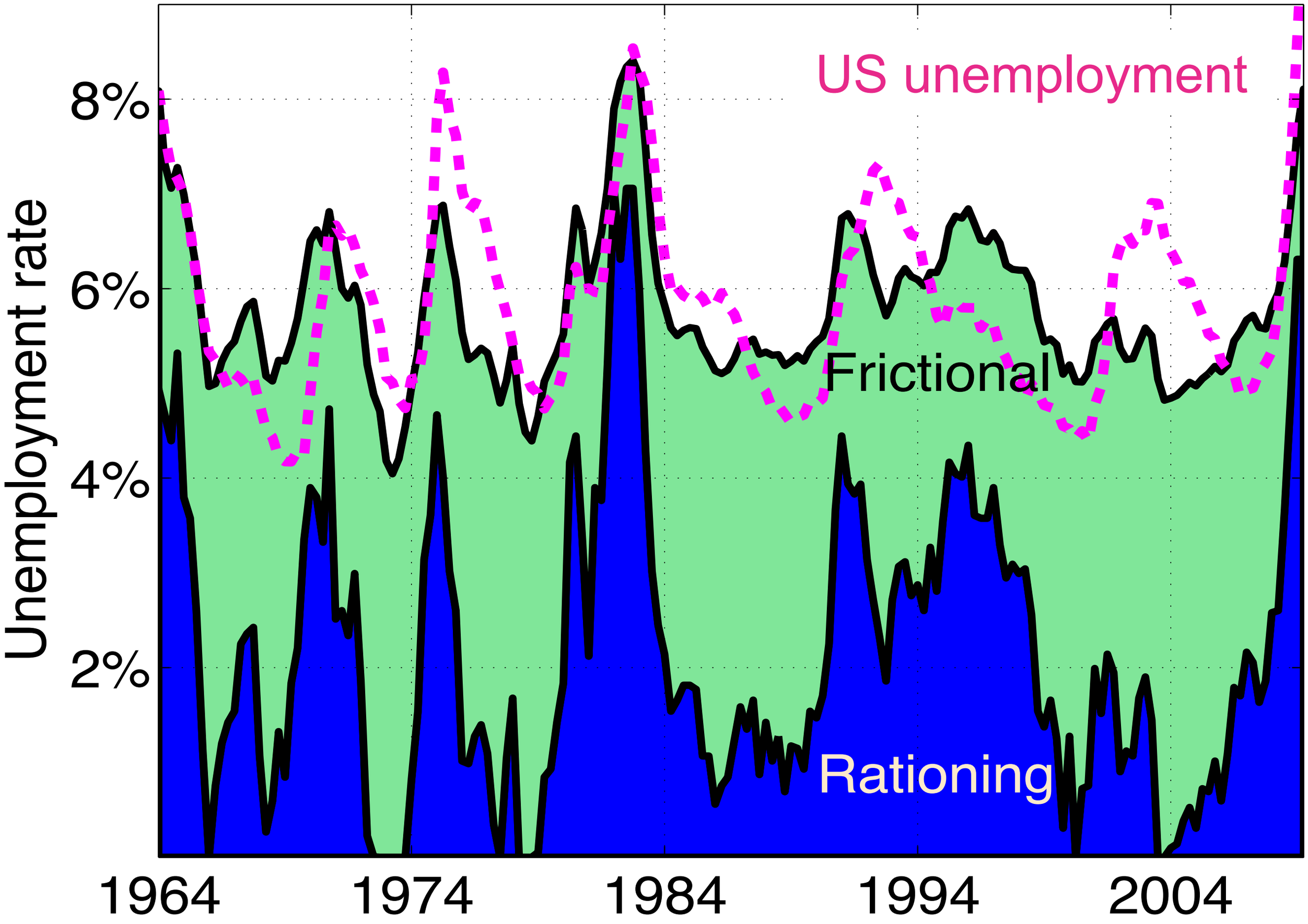
The model is simulated using measured productivity from US data and a shooting algorithm.




frictional = 1.3%
rationing = 7%
Frictional
Rationing
8%
6%
4%
2%
Unemployment rate
1964
1974
1984
1994
2004


Unemployment rate
8%
6%
4%
2%
Frictional
frictional = 4.8%
Rationing
1964
1974
1984
1994
2004


8%
6%
4%
2%
Unemployment rate
1964
1974
1984
1994
2004
frictional = 1.8%
Frictional
rationing = 6.3%
Rationing


US unemployment
Frictional
Rationing
Unemployment rate
8%
6%
4%
2%
1964
1974
1984
1994
2004


WAR MANPOWER COMMISSION
UNITED STATES EMPLOYMENT SERVICE
WAR MANPOWER COMMISSION
UNITED STATES EMPLOYMENT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