Healthcare Reorganization and the Future of European Growth

Some lessons from an historical and institutional analysis

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INTRODUCTION
Four key issues

• How to interpret the recurring debates about the need for reforms of the Healthcare systems?

• What analytical tools and theoretical models in order to study the impact of health on growth and welfare?

• Is there an optimal organization for healthcare? Would market mechanisms improve the situation?

• What should Europeans do in order to enhance growth by a reform of health and welfare systems?
Some caveats and precautions

- The vision of a « generalist » and not at all a specialist of healthcare.
- Analyses at the macro economic level
- An institutionnalist and historical approach
- Extended to a comparison between developed countries
Why so many discussions about the reforms of the healthcare systems?

• A renewed interest of international organizations about the role of health (and education) in the process of development
✓ The World Bank annual report 1993 “Investing in Health”.

✓ The building of human development indexes that give a strong emphasis upon health indicators.
✓ The recognition of poverty traps due to the complementarity of health and education within an endogeneous growth model

⇒ Geoffard, Verdier [2000]

✓ The Jeffrey Sachs report on “Macroeconomics and Health”, World Health Organization 2001

⇒ The underdevelopment as a consequence of bad health
Table 1 - An association of low income with poor health

<table>
<thead>
<tr>
<th>Development Category</th>
<th>Population (1999 millions)</th>
<th>Annual Average Income (US dollars)</th>
<th>Life Expectancy at Birth (years)</th>
<th>Infant Mortality (deaths before age 1 per 1,000 live births)</th>
<th>Under Five Mortality (deaths before age 5 per 1,000 live births)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least-Developed Countries</td>
<td>643</td>
<td>296</td>
<td>51</td>
<td>100</td>
<td>159</td>
</tr>
<tr>
<td>Other Low-Income Countries</td>
<td>1,777</td>
<td>538</td>
<td>59</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>Lower-Middle-Income Countries</td>
<td>2,094</td>
<td>1,200</td>
<td>70</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Upper-Middle-Income Countries</td>
<td>573</td>
<td>4,900</td>
<td>71</td>
<td>26</td>
<td>35</td>
</tr>
<tr>
<td>High-Income Countries</td>
<td>891</td>
<td>25,730</td>
<td>78</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Memo: sub-Saharan Africa</td>
<td>642</td>
<td>500</td>
<td>51</td>
<td>92</td>
<td>151</td>
</tr>
</tbody>
</table>

At each level of per capita income, a better health is associated with a faster growth
Table 2 – Growth rate of per capita income, 1965-1994
according to income and infant mortality rate, 1965

<table>
<thead>
<tr>
<th>Initial Infant Mortality Rate, 1965</th>
<th>IMR ≤ 50</th>
<th>50 &lt; IMR ≤ 100</th>
<th>100 &lt; IMR ≤ 150</th>
<th>IMR &gt; 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Income, 1965</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PPP-adjusted 1990 US dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP ≤$750</td>
<td>—</td>
<td>3.7</td>
<td>1.0</td>
<td>0.1</td>
</tr>
<tr>
<td>$750 &lt; GDP ≤ $1,500</td>
<td>—</td>
<td>3.4</td>
<td>1.1</td>
<td>-0.7</td>
</tr>
<tr>
<td>$1,500 &lt; GDP ≤ $3,000</td>
<td>5.9</td>
<td>1.8</td>
<td>1.1</td>
<td>2.5</td>
</tr>
<tr>
<td>$3,000 &lt; GDP ≤ $6,000</td>
<td>2.8</td>
<td>1.7</td>
<td>0.3</td>
<td>—</td>
</tr>
<tr>
<td>GDP &gt; $6,000</td>
<td>1.9</td>
<td>-0.5</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: The reported growth rate is the simple average of the GDP growth rates of all countries in the specific cell.
A caveat: health is both a cause and a consequence of development and may be complementary to education, innovation.
Figure 1 – Health is both an input and output of economic development

Economic Policies and Institutions
Governance
Provision of Public Goods

Human Capital, including:
education, on-the-job training, physical and cognitive development

Health

Technology, including:
scientific knowledge relevant for production
innovations in the domestic economy
diffusion of technology from abroad

Enterprise Capital, including:
fixed investments in plant and equipment
teamwork and organization of work force
investment opportunities
ability to attract labor and capital

Economic Development:
High Levels of GNP per capita
Growth of GNP per capita
Poverty Reduction
A second reason: rising dissatisfaction with existing health care systems for rich countries

✓ The increasing medical costs generate recurring financial disequilibria in welfare systems.
Figure 2 – The increasing share of health expenditures / GDP

Source: OCDE-CREDESS (1999)
When healthcare spending is limited by institutional design, a growing dissatisfaction about quality and flexibility (the British case)

The explosion of healthcare expenditures might be associated with wide inequality in terms of health (the American configuration)
Figure 3 - The relationship between public financing and ranking of fairness in health care distribution (9 Countries)

✓ Each health system is facing difficult trade-offs
• What criteria for assessing the reform of healthcare:

✓ Not only a matter of short run mismatch but the issue concerns long term evolutions

✓ At least two criteria: efficiency and equity.

✓ Static efficiency is not sufficient, dynamic efficiency and the impact on growth have to be assessed
The demise of the post-war growth regime calls for novel approaches of health and macroeconomics

- Reinterpreting the golden age of Fordism:
The engine of growth was the interaction between technological innovation and a specific wage labor nexus.

The dynamism of productivity increases allowed generous welfare entitlements and benefits, including for healthcare.
Figure 4 – The welfare system and the emergence of the Fordist growth regime in France
Thus, the share of welfare transfers has not any negative impact upon growth.
Figure 5 – before 1973: The transfers associated to welfare do not hinder national growth.
• Have healthcare costs and more generally welfare expenditures become an hindrance of growth in the era of ICT and globalization?

✓ The contemporary conventional wisdom: taxes and welfare contribution are adversary to innovation flexibility and growth.
Figure 6 – Lean welfare and low taxes as requisite for growth, employment creation and fight against poverty: the contemporary shift
The empirical evidence is not so overwhelming: within a cross section, no clear negative correlation between total factor productivity and general government spending.
Figure 7 - The relationship between total public transfers (1995) and multi factor productivity increases (1990-1998)

Source: Computed from OECD Economic outlook, December 1999, Statistical Appendix
Even in the era of ICT, an extended welfare state is not necessary an obstacle to the adoption of the new productive paradigm.
Figure 8 – Changes in MFP growth and change in business R&D intensity

Difference in Business and Enterprise RD intensity between 1980-90 and 1990-98

The organization of welfare systems matter: Denmark, Finland, Sweden
• A new vision of the welfare systems: they provide growth opportunities as well as they need the financing of the costs.

✓ A first move: from higher labor costs detrimental to labor demand ...
Figure 9A – The financing of healthcare by a tax on wage reduces employment and real wage …
…To a better quality of employment that induces a higher wage and productivity
Figure 9B – A more healthy (and educated) labor force gets a higher real wage and productivity...
In the long run, this better quality of human capital may trigger more innovation and total factor productivity:


- An historical example: the complete transformation of the Swedish model (1932-1989)
The healthcare system as a component of global welfare systems including education and training

Possible complementarities between health and education

Difficult to diagnose and test empirically...

...But reinforcing the likelihood of an endogenous growth model
Figure 10 – How health and education expenditure may enhance dynamic efficiency
The difficult search for an efficient organization of the healthcare system

• The contemporary wisdom has to be revisited:

✓ The firm is the key actor of modern economies…
   …thus the cost burden of welfare should be removed and borne only by individuals

✓ Explicit or quasi market mechanisms are required in order to curb down the cost of healthcare
• The teaching of some international comparisons: public funding is not that bad!

✓ National healthcare systems better than market led configurations in curbing down the costs?
Figure 11 – Public financing and share of health expenditures / GNP

Source: CREDES. Extracted from Henriet D., Rochet J.-Ch. (1999 :117)
✓ The importance of public financing is not detrimental to the average health level.
Figure 12 – The relationship between public financing and health level ranking
(15 countries)
✓ The overall performance of healthcare systems is not related to the importance of private funding
Figure 13 – The relationship between financing and overall health care system performance ranking (15 Countries)

Source: Computed from World Health Organization (2000:152-155)
✓ Public financing is able to promote fairness in the distribution of healthcare
Figure 14 – The relationship between public financing and fairness in health care distribution ranking (15 Countries)
Public financing of healthcare is associated with more efficient redistribution benefiting to the poorer.
Figure 15 – A strong association between poverty reduction by public transfers and public financing of health care

Source: OCDE. Extracted from Henriet D., Rochet J.-Ch. (1999 :119)
• THIS IS A CONFIRMATION OF THE CONCLUSIONS OF THE THEORY.

Health is a quite specific good that cannot be managed according to pure market mechanisms

✓ Significant externalities and public good aspect
✓ Health as a core component of ability and human rights
✓ Paternalistic constraints can benefit to individual well being.
✓ Private insurance and market mechanisms do not deliver social optimum.
• A viable and efficient welfare system should exhibit an adequate mix of various institutional arrangements.

✓ The alternatives to pure market mechanisms call for a complex architecture, not easily managed.
Figure 16 – The nested relations between health care users, insurers and healthcare producers

Source: Adapted from Henriet D., Rochet J.-Ch. (1999: 22)
Consequently, European systems display a significant diversity in terms of supply of care and financing.
Table 4 – The relative importance of privatization and market mechanisms in Welfare States: A fourth dimension.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Belgium</th>
<th>Denmark</th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
<th>Netherlands</th>
<th>Portugal</th>
<th>Spain</th>
<th>Sweden</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of the system</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Health Care System</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Reimbursement System</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Contractual System</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Another taxonomy for welfare systems: various level and degrees of solidarity (the family, the firm, the society)
Figure 17 – A simplified presentation of the three logic and organizing principles of welfare States: the structure of financing
The degree of privatization and reliance to the markets is far from being the key discriminating factors.
Figure 18 – The relative importance of privatization and market mechanisms in Welfare States: A fourth dimension
• The difficult task of policy makers: design a system where the deficiency of one allocation mechanism is corrected by the strength of another mechanism
Converting the European welfare systems from a liability into a growth engine

• The importance of assessing the relative impact of the factors affecting healthcare costs
✓ Richer individuals ask for more well being and healthcare.

✓ Price elasticity does exist but may have adverse effect upon the equal access to healthcare.

✓ The nature of collective coverage matters

✓ An underestimated factor: the intensity and endogeneity of medical technical change
Table 5 – The factors governing long term expenditures in healthcare: France 1970-1995

<table>
<thead>
<tr>
<th>Explained by:</th>
<th>Growth rate</th>
<th>Share in total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed evolution of health care expenditure</td>
<td>122</td>
<td>100</td>
</tr>
<tr>
<td>Explained by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Income effect</td>
<td>51</td>
<td>41</td>
</tr>
<tr>
<td>• Relative price effect</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>• Level of collective coverage</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>• Medical technical change</td>
<td>32</td>
<td>26</td>
</tr>
<tr>
<td>• Residual</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

• A major uncertainty: the impact of ageing.

✓ A mechanical impact smaller than expected.

✓ The institutional design for old age healthcare is crucial.

✓ What will be the impact of ageing upon medical technical change.
• One chance for Europe: converting welfare into the source of a novel growth regime.

✓ The internet bubble is over: the lag of Europe in terms of ICT is not that large
Figure 19 – Convert the information and communication technologies (ICT) into the basis for a Knowledge Based Economy (KBE)
Even in the US, the healthcare expenditures tend to overcome the consumption of durable goods
Figure 20 – Healthcare expenditures versus durable good consumption (share in total consumption) US 1930-2000

Dépenses en biens durables dans la consommation totale des ménages en %
Dépenses médicales payées par les ménages en proportion de leur consommation totale en %
Reforming the European welfare State in order to foster gender equality and respond to the ageing to the population: toward a genuine growth regime?
Figure 21 – An European strategy: Gender equality and responses to ageing as the source of a new service led growth
 ✓ The need for strengthening the medical research potential of Europe, in response to the emerging social needs.

 ✓ The diversity of welfare system reforms: an opportunity for a clever and institutional benchmarking
Figure 22 – Four strategies for reforming the European welfare States
Conclusion

- From static models of the short run impact of healthcare costs to the long run analysis of the externalities between health and growth.

- The reappraisal of quasi-market mechanisms call for an eclectic approach to the architecture to the healthcare systems.

- Do not forget that medical capital change is affected by the economic and the institutional configuration.
● The chance of Europe: reforming health care and welfare systems in order to convert them into an engine of growth, preserving social cohesion.

● A research agenda: the third stage of economic theory

✓ Analyzing the production of commodities by commodities

✓ Promoting the production of ideas by ideas

✓ Preparing an anthropogenetic growth model: the production of mankind by man
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If you are interested please consult:
“The French Welfare State” WP Cepremap n° 2000-07.and
the book “la croissance début de siècle”, Albin Michel,