5. Objectives and expectations

A national health insurance system will be judged with regard to the achievements of promised improvements, and success as well as sustainability will depend on the support of the society as a whole. Achieving objectives and realising broad societal support requires on the one hand professionalism in technical design, e.g. regarding economic and administrative feasibility. On the other hand, it is crucial to match new institutions with values and historical processes that have led to current characteristics of politics, labour movements, communal patterns, distribution of wealth and poverty, religion, and culture.

The impact of the existing socio-political environment and related constraints in achieving overall objectives is often underestimated when developing new health protection schemes. However, international experience with implementing nationwide health insurance schemes shows that a lack of support of key stakeholders and even failure might be a consequence of mismatching a new system with existing structures and behavioural patterns in a society. Therefore, it is necessary to develop policy features addressing challenges beyond technical feasibility, and thereby ensure that overall objectives are likely to be achieved.

5.1 Objectives and guiding principles aiming at establishing a fair and sustainable national health insurance scheme

The existing overall legal and policy framework in Yemen emphasises improving living conditions, socio-economic environment and health of the population. These overall objectives are reflected in the past health sector reforms, the final draft of the social health insurance law and major programmes and activities carried out by the Government of Yemen and other institutions in cooperation with international and bilateral organizations such as WHO, ILO and GTZ.

International activities included technical cooperation projects supported by the International Labour Organization (ILO) such as a comparative analysis of national legislation and practice in the light of ILO Core Conventions, implementing components related to labour market information systems and human resources development. In addition, workers’ and employers’ organizations in Yemen benefited from technical and financial contributions of ILO. This led to the ratification of many ILO Conventions including all eight Core Conventions namely,

- Convention No 29: Forced Labour, 1930
- Convention No 87: Freedom of Association and Protection the Right to Organise, 1948
- Convention No 98: Right to Organise and Collective Bargaining, 1949
- Convention No 100: Equal Remuneration Convention, 1951
- Convention No 105: Abolition of Forced Labour, 1957
- Convention No 111: Discrimination (Employment and Occupation), 1958
- Convention No 138: Minimum Age Convention, 1973
- Convention No 182: Worst Forms of Child Labour, 1999
- Convention No 144: Tripartite Consultation (International Labour Standards), 1976

Currently, the Consortium of GTZ, WHO and ILO on Social Health Insurance is supporting the Government’s efforts to introduce the national health insurance system in Yemen.

The overall political framework of the national health insurance in Yemen aims at contributing to better health particularly for the poor through improving financing mechanisms. Thus the national health insurance system should strive for an inclusive access to health services and link with the programmes and activities related to the achievement of the Millennium Development Goals (MDG) and poverty reduction strategies (PRSP). Particularly relevant in this context are efforts to eradicate extreme poverty, promote gender equality, particularly remove barriers to women’s access to health
care, reduce child mortality, improve maternal health, and combat HIV/AIDS, tuberculosis, malaria and other diseases.

Consequently, the design of the national health insurance needs to emphasise on the following core objectives:

- **Achieving universal access through introducing national health insurance coverage and protecting from health-related poverty.** This includes ensuring that coverage reaches out to the poor, women, migrants, elderly, pensioners and other vulnerable groups. In addition, the inclusion of the excluded should focus on responding to needs, improving accessibility and utilisation of health services while taking into account the households’ capacity to pay.

- **Striving for sustainability and solidarity in financing based on good governance and efficient use of resources.** This should lead to a significant lowering or removal of user fees for vulnerable groups, such as the poor, women and children, particularly for primary care. Further features to be taken into account include effective control and auditing of funds, monitoring of implementation of the law and regulations.

- **Supporting an active role of the state in facilitation, promotion and extension of national health insurance.** This includes supporting the development of innovative mechanisms such as community-based micro-insurance schemes, in particular in areas with low administrative and financial capacities, where coverage cannot be immediately provided through statutory schemes. Linkages between the national health insurance and the innovative schemes should be built in order to sustain small-scale schemes and support the provision of comprehensive benefit packages.

There are various options to detail these core objectives according to financial means, economic and socio-economic context and there is considerable flexibility as to how to achieve them. Strategic goals include maximization of membership, income and benefits e.g. through improving efficiency of management, decentralization, and need-oriented decision-making on benefit packages.

Some generally agreed guiding principles help to identify appropriate ways to meet the objectives mentioned:

- Equality of treatment and equal access to health services
- Solidarity in financing through risk pooling
- Inclusiveness in framing rights
- Overall responsibility of the State
- Transparent and democratic management including a participatory approach of management and governance based on social dialogue with workers, employers and other stakeholders.

When implementing the national health insurance system it should be taken into account that the political process of collective decision-making and active involvement of all stakeholders in national health insurance will take time and resources. Key stakeholders in the national health insurance system include besides representatives of members, potential members such as the excluded, workers’ and employers’ organisations, Government, community-based schemes and other innovative schemes providing health services, the poor, women, medical professions, providers and donors. Further, obtaining agreement from various external parties such as the Women National Committee for increased cooperation will be key issues.

### 5.2 Meeting overall objectives through addressing socio-political challenges in design and implementation of national health insurance

In order to meet these objectives, Yemen’s health system, its institutions and the behaviour of individuals, families and the population as a whole need to comply with and adjust to change. An
enabling policy framework for a fair and sustainable national health insurance scheme in Yemen requires particularly removing barriers and developing country specific solutions. This holds especially true for health-related aspects of poverty and empowerment of the poor, gender inequality and impact on access to health services, and accountability and corruption related to health services.

The most recent UNDP report stated that Yemen is “infested with corruption” throughout all sectors including those agencies who are in charge of accountability and preventing corruption. The lack of political accountability is closely related to the missing separation of powers and the concentration of forces.36 Thus, mutual control of the State’s pillars is limited, and Yemen’s participation in the “War on Terror” is certainly the only reason why United States refrains from commenting the lack of transparency and political accountability. Journalists who bring irregular incidents to the public and write about possible fraud where representatives of the Government might be involved, are running the risk of becoming victims of kidnapping and physical violations. Politicians of opposition parties go to the public for criticizing the practise of personal enrichment, arbitrariness and immunity of powerful and privileged groups. With regard to the health system in Yemen, the MoPH&P faces strong accusations of being a stronghold of misuse and mislead of resources. Due to the blacklisting, the Minister had to proceed to shut down 107 health institutions in the country after public health violations (Yemen Times, 12th Sept. 2005).

These factors have profound effects on future beneficiaries’ access to health services and thus on equity and equality. They will directly impact on the scheme’s effectiveness. Accordingly, design and implementation of national health insurance need to deal with relevant evidence of the country’s socio-political environment. And it has to take measures in order to prevent as far as possible corruptive behaviour of health insurance personnel, to minimise fraud and to tackle with deficiencies with regard to social trust and reliability.

5.2.1 Health-related aspects of poverty and empowerment of the poor

Large parts of the population in Yemen are living in extreme poverty. Limited access to health services impacts on ill health, income security and poverty; on the other hand, health system development can contribute significantly to poverty alleviation and is an integral part of sustainable development.

In developing countries, every year 178 million people are exposed to catastrophic health expenditure, and more than 100 million are forced into poverty by health care cost (WHO 2005c). Given the high share of out-of-pocket payments on health expenditure in Yemen it can be assumed that health care costs play an important role in impoverishment and deepened poverty of the population. The poor often bear the financial burden of ill health and the related loss of income and savings. In many cases, ill health leads to a medical poverty trap. In order to cope with the financial burden of ill health households often use welfare threatening strategies for example selling assets such as land.

Even those who have some kind of health protection might experience that the benefit packages do not protect against catastrophic costs. That means that they are exceeding the households capacity to pay and people have to use up their savings or even to sell assets which are important for income generation. Consequently, negative impacts on poverty, malnutrition, child mortality, maternal health and diseases such as HIV/AIDS are experienced. Mostly concerned is the rural population, women, workers in the informal economy, the self-employed, unemployed and elderly. As a result, inequalities in access and exclusion of certain groups occur. This situation is worsened by low enforcement of the law and institutional failings.

From an economic point of view, untreated diseases and lack of access to health services impact on productivity and per capita income, years of income due to reduced life expectancy and health status.

36 The president is the commander-in-chief of the army, the chief judicial officer and the head of the ruling party that has a broad majority in the Parliament.
Further, fragmentation of health financing might result in increased national health expenses. Finally, lack of access to health services affects the competitive capacity of economies in international markets. From a social point of view, improved access to services and related improved equity are leading to social development and help to promote social peace and stability.

Against this background, it will be necessary to cover the most vulnerable groups from the very beginning of the implementation of the health insurance law. Coverage of those who are better off need to be combined with increasing coverage of the poor in order to share risk pools on a basis of solidarity. Exclusive coverage of closed groups such as the police or military does not correspond to key objectives of the law and cannot be seen as a viable option.

Further, it is imperative to integrate all stakeholders of the national health insurance as outlined above in the decision-making process and governance of the new system. It will be important to involve particularly those who are most in need. Only a broad participation of these groups will ensure that the new system is adequately guided and adjusted to needs, gain trust of the population, and receive national and international support in funding.

Empowerment of the poor and their solidarity-based health institutions as well as women is key for the success of the national health insurance system. Despite high levels of illiteracy and lack of awareness of political processes, improvements in access to health services of these groups will shape the public opinion on the new system and impact on evasion of contribution payments. Therefore, it will be necessary to seek feedback and empower these groups, e.g. through providing technical and management training and developing manuals and other relevant material on the national health system.

Given the high percentage of poor people living and working in the informal economy in Yemen, it will be necessary to also involve communities and non-governmental organizations in seeking solutions to address health-related poverty in schemes to be linked to the national health insurance system. Communities and their schemes can be very efficient in reaching out to the poor, collecting contributions of informal sector workers and reduce expenditure for the most vulnerable. Support to implement and develop these schemes should be provided through enhancing skills in accountancy and administration, allocation of health budgets, creation of transparency with regard to health budgets, allocation and expenditure, and continuous monitoring of the implementation process.

In order to support sustainability of the often small-scale risk-pools it will be useful to search for adequate financial and administrative linkages with the national health insurance and provide financial and technical support, e.g. regarding management, administration and governance. In order to better reach workers in the informal economy and their families it is advisable that the national health insurance system is efficiently decentralised and consists not just of one authority but networks all schemes and institutions providing services to the population. External funding such as grants and loans should offset shortfalls in revenue. However, it should be taken into account that external funding is not sustainable and over-dependence might thwart implementation of the national health system.

5.2.2 Gender equality and access to health services

Yemen’s female population is highly marginalised and excluded from a large number of socio-economic activities. The status of women is characterised by a high rate of female illiteracy (74 % in rural Yemen; ILO Labour Force Survey, 1999) which often leads to a lack of information related to their rights, e.g. free treatments in public health services. Consequently, these rights are not used and health services might not be accessed due to high out-of-pocket payments.

Further, women’s participation in the formal labour market is with 21.8 % low compared to 69.9 % of male participation. De facto, only 13.8 % of female employment is in paid employment. (ILO 1999) Female labour market participation is mostly (92.7 %) in the private sector and here particularly in the
agriculture (87.2 %). (ILO 1999). When designing a national health insurance scheme it needs to be taken into account that the majority even of working women will not benefit from improved access to health services if coverage does not include family members.

Another relevant feature of the labour market includes the fact that most married employees in Yemen are living on their own in major cities while their wives and families are living in rural areas. This applies particularly to persons working in the police and military, but also to other groups particularly to the poor and low-income families. This pattern needs to be taken into account when deciding about coverage of national health insurance: Given the lack of medical infrastructure in rural areas a de facto exclusion of women and children from access to health services might be the result. Options which limit coverage to these groups even if only foreseen at an initial state of the implementation counter the overall objective of equal access and equality.

Despite the fact that Yemen’s laws respect that men and women enjoy equal rights and obligations there are many socio-cultural norms that undermine significantly equality. They include the husband’s permission to work in the public sector, restrictions on women’s mobility outside their homes, sharshaf restrictions and lacking access to and control over resources.

These socio-cultural norms have a significant impact on women’s access to health services and need to be taken into account when designing the national health insurance system. The following examples illustrate the degree of discrimination challenging women in Yemen:

- Even business women are living under mobility restrictions and cannot leave their home without being accompanied or “secured” by their husband, father or son. This is a significant barrier e.g. for midwives.
- If sick, women and their children have to get the agreement and need to be accompanied/ guarded e.g. by their husbands, fathers, brothers or sons if they wish to access health services. Due to time and cost impacts of out-of-pocket payments this is often refused until severe stages of diseases. Further, transportation costs to health services are doubled.
- Female doctor’s and nurses need to cover their head – sometimes even the whole face except their eyes, with sharsharf even when carrying out their profession.
- The same rule applies to female patients who are only allowed to remove the sharsharf if treatments in the face have to be carried out.

The situation is worsened by the fact that in many cases male health is given priority in health budget allocations in case of scarce resources. A current example can be seen in the lack of budgets allocated to blood banks used to 45 % by women giving birth. These patterns and poor medical infrastructure, particularly in rural areas, have far ranging implications on women’s and children’s access to health services and their health status. Women in poor households are most often victims of these norms. Women’s life expectancy, child mortality, the high rate of breast and cervix cancer reflect this lifestyle and related circumstances described.

Against this background, it is not surprising that poverty often has a female face in Yemen. Therefore, the new national health insurance scheme needs to address women’s issues as outlined above. The overall objective in this respect should be to improve women’s access to health services through features such as

- Equal representation of women and men in new advisory and executing institutions such as the stakeholders’ task force, the board of directors of the health insurance authority and controlling institutions.
- Equal representation of female and male advisors on the design of benefit packages and other advisory groups
- Inclusion of families in the coverage of the national health insurance
- Extended coverage to the rural population, the poor, workers and their families in the informal sector from the initial stages of implementation
- Specific provisions to improve women’s access to health services e.g. financial incentives for regular check-ups of women and children.
Towards a national health insurance system in Yemen – Part 1: Background and assessments

• Improved access to health services through mobile doctors visiting women and children at their homes, e.g. in rural areas
• Coverage of transportation costs of escorts for poor women
• Awareness campaigns for women regarding rights related to national health insurance
  o Institutional mechanisms aiming at ensuring participation of women on all levels of the decision-making process
  o Formulation of policies for budgetary allocation for women’s health

5.2.3 Accountability and corruption in the context of health

Evidence drawn from local newspapers and public opinion suggests that in many cases funds allocated to the health sector are challenged by a lack of accountability and corruption. Currently, this translates often into inadequate funding of health facilities and hospitals, lack of infrastructure, low quality of services, shortages in drugs, limited operation and maintenance budget of facilities. Further, often a legal promise is de facto not applied, such as free treatments for the poor or for women giving birth and out-of-pocket expenditure is not uniformly applied.

Against this background key threats of members and potential members in the national health insurance include increased poverty due to contribution payment without improved access to and quality of health services. These fears are even shared by the better off since contribution rates to existing social security schemes already amount to 20% of salaries. They are topped by some 15-25% of taxation. Contributions for the national health insurance system will add to these salary deductions. Further, in case of sickness, the draft legislation of the national health insurance system foresees co-payments amounting to one third of the price of drugs and services for the insured.

This leads to a high degree of mistrust in public institutions and provokes already at this very early stage of the national health insurance systems discussions on the misuse of funds to be collected. Such perceptions might lead to a lack of support of key stakeholders in health insurance ranging from the Minister of Finance and the international donor community to evasion of contributions and thus failure of the reform.

The manifold reasons behind the observed lack of accountability include low remunerations of staff in all institutions involved in the health sector and the lack of control and independence of institutions including providers and other stake-holders. Auditing and control is missing in nearly every institution, and immunity of illegal personal enrichment as well as the far going public acceptance of misuse and corruption. In order to avoid any further damage of the good intentions of the reform and the Government’s commitment, it is suggested addressing already in very early stages of internal and public discussions measures against misuse and corruption within the national health insurance system.

Pro-active measures addressing issues of accountability and corruption should be already foreseen in the design of the new system. They include a series of measures such as a strict enforcement of rights and obligations foreseen in the law, transparency in allocation and use of funds, democratic governance, and independent control and auditing involving international auditors. A adequate follow up and punishment of fraud detected e.g. exclusion of providers from reimbursement should be in place, and public relation campaigns upon corruption have to play an important role. Further useful instruments to prevent misuse of funds might be addressed by creating new oversight mechanisms such as local control boards, introducing incentives e.g. publication of positive results of auditing, and disseminating information on good practices.
5.3 The pattern of expectations of interview partners in Yemen

Most Yemenis and many interview partners do not know what a social and national health insurance system is. The word “insurance” has certain ambivalence in the Moslem World and not at all a very positive connotation. This was unluckily reinforced by two circumstances.

- Private and public pension insurances do not have a very high reputation. Contributions are deducted regularly from salaries but benefits are given only far in the future for some and for others the pensions seem to be very small, in case they can be obtained after a long time of services in government or in the private sector. Many people – it does not matter if right or wrong – complain about the pension insurance funds and one third of interviewees mentioned that such funds should not be taken as an example for health insurance.

- Since the early nineties deductions were taken from salaries in the name of health services or health insurances, that were virtually not existing. The deducted contributions flew back into the national treasury and disappeared somehow. The same happened with deductions in the name of work injuries which never saw a visible return in services to the worker or employee. There are several of such deductions as for example in the case of the teachers whose syndicate started with a solidarity scheme based on voluntary deductions which was then converted into a mandatory deduction asked for by the Ministry of Education without returning benefits.

Even high ranking interview and discussion partners were not that enthusiastic on health insurance. A very few expressed, that health insurance is a ‘must’, but a very enthusiastic awareness of its benefit for Yemen could not be discovered. Many of the interview partners, especially in the political parties, mentioned that there are more important priorities to deal with: “food insurance” as two partners called it, fight against poverty diseases and preventive measures to avoid avoidable diseases and suffering.

Nevertheless, there is a polite openness to discuss health insurance issues and even details, especially among politicians asked. But a clear goal-orientation and political vision is not given, neither any commitment. For two of the opposition parties health insurance is an excuse to shift away a given responsibility of the government to an unknown health insurance authority which might face problems with trust and credibility. For the other parties there were more important priorities for the political campaigns.

Worker unions presented themselves as one of the very few stakeholders demanding health insurance. Their expectations are patterned according to experiences of colleagues in public and mixed companies who receive medical benefits without paying contributions for them. In line with this they would accept a maximum contribution rate of about 2% of their salaries with a share for 5-6% from the employers. Such a contribution should provide the fullest benefit package possible, including for father and mother living in the workers’ household. The workers of the public and mixed companies fear that a national health insurance scheme will harm the existing benefit schemes they fought for in long labour disputes and negotiations.

Employers of public companies are interested in health insurance. It could reduce the high costs they spend now for medical benefit packages, especially in the case of a rare and catastrophically high case of illness with several needed treatments abroad. The same holds true for private companies that started to offer fringe benefit schemes for their employees and workers, including medical benefit packages. Furthermore they hope to benefit from an inclusion of sick-leave benefits in a social health insurance, so to reduce their payments for off-duty workers in case of a prolonged illness.

Among the medical professionals there is probably the best understanding of health insurance. However, vested interests intervene strongly, and improved income conditions seem to be an important driver mainly for medical doctors, but also for nurses and other clinical staff. A rational choice of providers according to clear standards of quality and efficiency, and based on decisions of managers and economists would not be their preferred option. The medical association tried to
convince their own members to build up a solidarity or insurance scheme. The majority declined to agree to it.

5.4 The pattern of expectations of opinion leaders in Yemen

Some results of 110 interviews with opinion leaders in Yemen hint at the following pattern of preferences. The percentage figures indicate which proportion of the interviewees stand behind the following statements:

- 91% There is a real need for health insurance
- 91% Cost-sharing leads to postponement of treatments
- 90% Informal payments are often given (about 200 YR for PHC and 2000 YR in hospitals)
- 89% Expect good services with health insurance
- 87% Would join health insurance
- 84% Cost-sharing is not well organised
- 80% Government employees should be covered first by health insurance
- 78% Cost-sharing is bad and unfair
- 77% Drugs should be included in benefit package
- 72% Would trust in health insurance fund
- 63% Exempted diseases are not taken care of
- 63% Autonomous health insurance organisation as agent
- 60% Health insurance should be organised at national level
- 58% Employee, wife, children and parents should get benefits
- 54% Health insurance should be mandatory
- 52% Health insurance should start immediately
- 41% Pension fund is a model for health insurance
- 35% Pensioners are too poor to pay for health care
- 0% Health insurance should benefit employees only (and not the families)

Results of the opinion survey will be quoted in various chapters of the reports.

The first question of the questionnaire tried to elicit information on existing solidarity schemes for health in Yemen. Many opinion leaders know such schemes, as shown in the following table.

<table>
<thead>
<tr>
<th>Type of schemes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support by neighbours and/or family</td>
<td>58</td>
</tr>
<tr>
<td>Support by charities and donations</td>
<td>52</td>
</tr>
<tr>
<td>Self-help or mutual support of social groups</td>
<td>49</td>
</tr>
<tr>
<td>Support by employers to cover health care costs</td>
<td>40</td>
</tr>
<tr>
<td>Support by religious groups, e.g. mosques</td>
<td>27</td>
</tr>
<tr>
<td>Mutual support of professions, like physicians</td>
<td>25</td>
</tr>
<tr>
<td>Support through Zakat contributions for health</td>
<td>13</td>
</tr>
</tbody>
</table>

Multiple answers were allowed
Source: GTZ&EC opinion survey 2005

Highest ranking and according to expectations is the support by neighbours and families. Nevertheless, the same figure hints at the fact, too, that 42% of the respondents do not mention it. Could this be interpreted as a sign of growing individualism and the loss of family ties in a modernizing society? In depths studies might study this issues. Interesting is also, that employers are mentioned more often than religious groups. Such responses have to be studied in depths by focus group interviews. They hint at intriguing issues of social relations.
Regarding the proposed division of labour between government and health insurance there is a relatively clear opinion of the leaders related to basic health care, including prevention and vaccination, MCH and PHC, which should be in the hands of government. Related to chronic and catastrophic conditions, there is a mixed feeling, whether government or health insurance should be the lead agent. The main domain of health insurance is seen in the area of curative health care.

<table>
<thead>
<tr>
<th>Health programmes</th>
<th>Government %</th>
<th>Health insurance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother and child health care</td>
<td>93</td>
<td>9</td>
</tr>
<tr>
<td>Vaccination programmes</td>
<td>92</td>
<td>6</td>
</tr>
<tr>
<td>Prevention of diseases</td>
<td>91</td>
<td>5</td>
</tr>
<tr>
<td>Treatment of infectious diseases</td>
<td>89</td>
<td>12</td>
</tr>
<tr>
<td>Primary health care</td>
<td>85</td>
<td>10</td>
</tr>
<tr>
<td>Promotion of healthy life styles</td>
<td>82</td>
<td>12</td>
</tr>
<tr>
<td>Life threatening emergencies</td>
<td>76</td>
<td>33</td>
</tr>
<tr>
<td>Very costly and catastrophic diseases</td>
<td>65</td>
<td>59</td>
</tr>
<tr>
<td>Treatment of chronic diseases</td>
<td>58</td>
<td>54</td>
</tr>
<tr>
<td>Secondary health care</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Drugs</td>
<td>45</td>
<td>77</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>38</td>
<td>73</td>
</tr>
<tr>
<td>Accidents (fractures, traumasms etc.)</td>
<td>37</td>
<td>75</td>
</tr>
<tr>
<td>Outpatient treatment</td>
<td>34</td>
<td>75</td>
</tr>
<tr>
<td>Specialized or tertiary health care</td>
<td>32</td>
<td>75</td>
</tr>
</tbody>
</table>

Sorted according to government responsibilities, first
Source: GTZ&EC survey of opinion leaders, 2005

A more comprehensive review is given in part 3 of our study report. It is recommended, that such studies are undertaken with opinion leaders in rural areas, too, so to avail step by step of a more representative picture of attitudes and opinions. A full analysis of the results will be done by the partner of our study, especially regarding deviations of certain groups of opinion leaders from the mainstream of opinions.

6 International experiences

Options for health insurance can be developed theoretically as is the case with the many publications on this issue written by health economists and public health specialists. Their insights and theories are very helpful for designing health insurance options. Some relevant documents will be included in the electronic attachment to our study report. Another option for developing health financing options is to look at the historical development in specific countries or at a cross-sectional comparison of various countries. We will look first at countries in the Eastern Mediterranean and North African neighbourhood of Yemen, present then very roughly lessons from other developing countries around the world\(^\text{37}\), and finally we will discuss some remarkable trends of the long term historical trends in Western Europe.

\(^{37}\) More details will be given in various chapters of part 3 of our study report.