

## **WifOR study „The ‘Social Impact’ of medical innovations” – results, study design and backgrounds**

Medical progress through innovative products induces not only benefits for the patient, but also unfolds effects in the economy and the society. The economic research institute WifOR identifies these **impact chains** for the first time with its study “The ‘Social Impact’ of medical innovations” **using the example of the pharmaceutical Entresto®**. The study is based on a clinical trial, which compares Entresto® with the current standard therapy for the treatment of chronic heart failure. Entresto® lowers the mortality and reduces the number of hospitalizations compared to the standard therapy.<sup>1</sup> The present Impact Study of WifOR investigates the social effects that result from the life-prolonging effect of the medicine.

### **Key Results**

WifOR calculates a **Social Impact of Entresto®** in the amount of **EUR 2.1 bn until 2030**.<sup>2</sup> This Impact consists of the following three elements:

- About **110,000 additional years of life** are gained through the application of the pharmaceutical.
- Due to **additional years of employment** of heart failure patients, **avoided losses in value of EUR 607 m** could be generated until 2030. Thereof, EUR 257 m result from avoided direct loss of productivity, which is followed by EUR 350 m of indirect and induced gross value added.
- From voluntary work and household production (non-market activities) **gross value to the equivalent of EUR 1,5 bn** (about EUR 735 m equivalent resulting from non-market activities and EUR 803 m from indirect and induced gross value) could be achieved. In particular, this results from gained years of life from pensioners.
- The market and non-market activities cause **income tax and social insurance revenues** in the amount of **EUR 370 m up to the year 2030** (fiscal contribution to public budgets).

The study by WifOR provides a **new and valuable perspective on medical progress**. Medical innovations have impacts that go far beyond the individual health benefits of patients and which can be described from a macroeconomic perspective. While in **other European countries, a wider view of medical innovations is usual**<sup>3</sup>, in Germany **no comparable scientific approaches** for an overarching consideration of innovations in the healthcare industry are available.

### **Study design: The Social Impact consists of three different 'Footprints'**

WifOR defines the Social Impact as an interaction of **health, socio-economic and fiscal effects**, which are caused by the introduction of an innovative therapy:

- The **Health Footprint** describes the individual **health benefits** for patients **based on clinical trials**.
- The **Socio-economic footprint** represents the **socio-economic benefits** for society in terms of **avoided productivity losses, welfare gains from non-market activities** as well as indirect and induced spillover effects.
- The **Institutional footprint** quantifies **avoided losses of tax revenues and social security contributions** from employee's compensation.

Through the quantification of voluntary work and household production, the Social Impact also considerably contributes to the current "Beyond GDP" debate.

### **Background: The Impact Study and the political debate**

The impact study by WifOR takes up an ongoing political debate: For quite some time the importance of **the health care industry for growth and employment and thus the social prosperity** is discussed (keyword "Health Satellite Account"). The Social Impact transfers this approach to specific medical innovations and develops the perspective of recent economic footprint analysis.

As a research-driven pharmaceutical company, Novartis wants to give an **impulse for a comprehensive view of medical innovations**. While the value of technological progress in other sectors in Germany is discussed economically and socio-politically, this important debate is still at the beginning in the healthcare industry.

For methodological reasons, the **modelled value added effects** cannot be contrasted directly with the costs of a pharmaceutical for the health insurance.<sup>4</sup> The gross value added - as a central characteristic of the study - for example is adjusted for any intermediate consumption, while they are included in the costs. Most importantly, for health and ethical reasons, the link is questionable. **Access to innovative therapies** should be **ensured for all patients**, regardless of the extent of downstream **economic effects**.

The impact study shows that in addition to the early benefit assessment of drugs (AMNOG) **other important points of view of medical progress** exist, and to what extent **medical innovations create social potentials**.

## References:

<sup>1</sup> McMurray, J.J., Packer, M., Desai, A.S., Gong, J., Lefkowitz, M.P., Rizkala, A.R., Rouleau, J.L., et al. (2014), Angiotensin–Neprilysin Inhibition versus Enalapril in Heart Failure. N Engl J Med 2014;371:993-1004.

<sup>2</sup> Ostwald, D.A., Gerlach, J., Hofmann, S., Müller, M. (2016): Der „Social Impact“ medizinischer Innovationen – Fallstudie zu gesundheitlichen, sozioökonomischen und institutionellen Wirkungs-mechanismen im Indikationsbereich Herzinsuffizienz, Darmstadt.

<sup>3</sup> ebenda, S.6.

<sup>4</sup> Ostwald, D. A. (2008): Wachstums- und Beschäftigungseffekte der Gesundheitswirtschaft in Deutschland. Dissertation, MWV Verlag, Berlin

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