## Green Growth and Theoretical Framework

## Theoretical framework

Since the conventional theory on life satisfaction has largely been focusing on economic (income, unemployment, inflation) and social (health, demographics, education) determinants, an environmental component is missing from the standard theoretical framework (Sekulova 2013, 18). Therefore, the theoretical basis of the main hypothesis builds on both climate and subjective well-being literature.

In light with the rising pressure of climate change, the mankind has been facing twin challenges of expanding economic and development opportunities for the fast growing population, while also staying within the boundaries of the environmental constraints. During the onset of the climate discourse in the 1990s and 2000s, the global community labeled the twin challenges as the notion of "sustainable development" (Jakob 2014). Recently, the issue of reconciling development with natural resources adopted a fresh theoretical notion of "green growth", advocated by the major international organizations (World Bank, United National Environmental Protection, Organization for Economic Cooperation and Development) (Ibid). The strong green growth proponents argue that stringent environmental policies would have positive impact on economic growth even in the short-term, while their more moderate counterparts emphasize that the sound climate actions are necessary to undertake in order to preserve the world for the future generations, but also avoid devastating changes in the present world (Ibid).

Although the green growth theory does not explicitly juxtapose climate economics with the theory of life satisfaction, it recognizes "natural factor as a factor of production and its role in enhancing well-being" and points at the adverse effects of climate change and environmental degradation on the human progress (OECD 2011, 20). The OECD has lately added a group of socio-economic indicators to its scorecard of the green growth strategy in order to link it to the social goals, such as poverty reduction, social inequity and inclusion (OECD 2014, 21). Moreover, the OECD have initiated guidelines for measuring subjective well-being as a proxy of quality of life alongside other social and economic dimensions to have a potential framework for measuring the progress of green growth policies on individual happiness (Ibid). These developments give ground for the main hypothesis of the given research: "greener" performance reflected in lower GHG emissions and weaker environmental concerns will likely increase individual well-being due to the benefits of the green growth approach in the current climate situation.

Simultaneously, the traditional social outlook on life satisfaction justifies the inclusion of other variables (age, gender, employment, and family status) into the empirical model, as these individual-level characteristics play an inextricable part in one's quality of life and thus should be included as controls in regression analysis to avoid generating biases in the estimations (Conceição and Bandura n.d., 13). Furthermore, these sociodemographic factors may pose as life-changing events, which either potentially can permanently impact life satisfaction (ex.: divorce, unemployment due to acquirement of disability, etc.) (Ibid). This research papers anticipates that older age negatively affects life satisfaction, as older individuals tend to report worse health conditions and more unfortunate life events (ex.: death of a partner and relatives). There are empirical studies claiming U-shaped effect of age on happiness based on the Western experiences (Blanchflower 2008; Blanchflower and Oswald 2007; Helliwell 2003). Nevertheless, a number of other factors and cohort effects should be included in the model to observe robust U-shaped relationships. For the simplicity reasons, this research assumes negative linear relationship between age and happiness. While gender appears in the model for exploratory reasons, the anticipated effects of employment and family statuses are intuitively positive.

On the other hand, the inclusion of individual income as one of the economic factors is more contentious. Easterlin found a positive effect of individual income on life satisfaction, although with rapidly diminishing returns (Easterlin 1974). However, the same study also established the "Easterlin Paradox", as on the aggregate national happiness over time was stable despite increasing GDP per capita. Therefore, a separate model is run on a reduced sample of solely employed respondents in order to test whether or not at the individual-level income plays a positive role.

Blanchflower, David G. 2008. "International Evidence on Well-Being," no. IZA DP No. 3354. Institute for

the Study of Labor.

Blanchflower, David G., and Andrew Oswald. 2007. "Is Well-Being U-Shaped over the Life Cycle?" no. 12935. National Bureau of Economic Research.

Conceição, Pedro, and Romina Bandura. n.d. "Measuring Subjective Wellbeing: A Summary Review of the Literature." Office of Development Studies, United Nations Development Programme (UNDP). http://web.undp.org/developmentstudies/docs/subjective wellbeing conceicao bandura.pdf.

Easterlin, Richard. 1974. "Does Economic Growth Improve the Human Lot? Some Empirical Evidence." In *Nations and Households in Economic Growth: Essays in Honour of Moses Abramovit*, edited by P. David and M. Reder. Academic Press.

Helliwell, John F. 2003. "How's Life? Combining Individual and National Variables to Explain Subjective Well-Being." *Economic Modelling* 20 (2): 331–60.

Jakob, O. Edenhofer, M. 2014. "Green Growth, Degrowth and the Commons." Oxford Review of Economic Policy 30: 447–68.

OECD. 2011. "Towards Green Growth." *OECD Green Growth Studies*. OECD Publishing. doi:http://dx.doi.org/10.1787/9789264111318-en.

——. 2014. "Green Growth Indicators 2014." *OECD Green Growth Studies*. OECD Publishing. doi:http://dx.doi.org/10.1787/9789264202030-en.

Sekulova, Filka. 2013. "On the Economics of Happiness and Climate Change." PhD thesis, Universitat Autonoma de Barcelona & Institut de Ciencia i Tecnologia Ambientals. https://ddd.uab.cat/pub/tesis/2013/hdl\_10803\_120213/fs1de1.pdf.