

# Happiness and innovation Avenues for further research

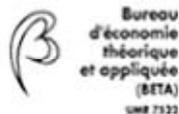
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# 1 Introduction

Do innovations make us happy? Or do we need to be happy in order to be innovative? Happiness (conceived as subjective well-being, SWB) and innovation are two terms that play an important role in the agendas of policy-makers and societal actors alike. Innovation is *the* cornerstone for economic growth and therefore subject to various public incentives in order for private actors to continue to produce new products or processes. While economies grew in the long run during the last decades (despite the huge losses during the recent financial crisis in 2008/09<sup>1</sup>), it can be observed that the subjective well-being of citizens in industrialized countries tends to stagnate or even decline. This is a core finding of the illustrious and often challenged "Easterlin paradox". Instead of seeing happier people, we observe that psychological illnesses such as burnout syndrome, depression or addiction are on the rise.<sup>2</sup>

How can we define the relationship between two of the most pressing issues of modern industrial societies? In this paper we argue that the two terms, SWB and innovation, are intrinsically related and future research is needed in order to connect them and to benefit from the vast amount of empirical and theoretical research devoted to these two topics in recent years. These strands of research have remained, unfortunately, rather isolated and unconnected up to now. In this paper we intend to explore several avenues in order to link innovation research and recent findings of happiness research together.

In innovation research the "normative turn" in innovation policy has recently been a matter of discussion. In short, this "turn" refers to the contribution of technological innovations to the solution of pressing modern day challenges such as climate change, energy transition or health issues. This shows that social well-being is mostly considered in a mono-directional way: innovations, if directed towards social needs or grand challenges, may contribute to social well-being. It also needs to be emphasized that even though this development is visible, the vast majority of innovations and also innovation policy recommendations firstly and foremost focus on market success. Subjective well-being (i.e. happiness) is hardly ever considered. Thus the question at stake is: Shouldn't innovation policy-makers consider SWB more than in the past? Shouldn't policy-makers make SWB a precondition for the public support of innovation, that is to say, no longer focus merely on the market success of innovation (which still remains important)?

In this regard, we propose that innovation research (mainly dominated by economics and management sciences) can benefit significantly from including research from other disciplines such as psychology, sociology, philosophy, geography, etc. which have been exploring the issue of subjective well-being for decades.

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<sup>1</sup> In April 2009 the IMF estimated the costs of the financial crisis at around 3.100 billion euro (<http://www.tagesschau.de/wirtschaft/iwf162.html>).

<sup>2</sup> A recent pan-European study revealed that approximately 40% of EU citizens suffer from some psychological illness (<http://www.spiegel.de/wissenschaft/medizin/0,1518,784400,00.html>). A similar study in 2005 showed that the economic costs for such psychological and neurological illnesses can be estimated at around 386 billion euro – per year. It is noteworthy that approximately 4% of European GDP are being spent for unwell-being (<http://www.oecd.org/dataoecd/6/48/41686440.pdf>). This is ironically clearly more than the often cited goal of the European Commission to spend 3 % on science and technology.

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## 2 A change of paradigm?

In the course of the rising importance of modern ICT, and more specifically during the last decade, a new phenomenon has been observed in the way innovative products and processes are developed. The success of firms such as Apple points to the importance of formerly "soft" factors such as design. Many approaches of today's new products, services and processes are intrinsically hybrid in nature, meaning that they require the knowledge from several disciplines. To go one step farther, when considering important aspects of hybrid approaches, such as open source innovations, ICT-oriented long tail marketing and new distribution channels, or do-it-yourself opportunities, we observe a shift in paradigms in the way in which products, processes and services become successful on the market. The afore mentioned aspects all have certain similarities: happiness as well as creativity become additional production factors in addition to the traditional factors such as capital and labour.

This shift in paradigm is not limited to the economic dimension. Moreover, it can be observed in social and ecological aspects as well. Layard (2005) and others showed that social deprivation (e.g. missing family ties) and environmental pollution have a negative effect on people's happiness. In order to deal with these challenges, people start new initiatives that rely on creative, open and more democratic forms of participation. Thus, the recollection of someone's subjective well-being becomes the motivation to start creative actions.

These dimensions show that the issue of happiness touches fundamental domains of our daily lives that cannot be measured in purely economic terms.

It is a long established fact that innovations are the main drivers of growth in modern economies. The amazing advances of technologies in the last two decades, combined with an increasing liberalization of international trade, led to a profound restructuring of national production patterns and international flows of goods and services. It is indisputable that in these new patterns of trade and production, knowledge is perceived as an essential element for the innovation process and exported economic growth. Therefore, in order to cope with today's complexities and to benefit from globalization dynamics, it is imperative to create, disseminate or adapt knowledge. Shorter product life cycles, international competitors and rigorous IPR regulations put pressure on firms and governments alike and entail a constant need to be innovative (Rycroft and Kash 1999). However, critical aspects of knowledge such as creativity, insight, curiosity or wisdom receive little attention, but instead "...the predominating emphasis on creating knowledge (and innovation) at faster and faster rates – the 'politics of urgency' – produces an almost autistic inability for reflection and consideration." (Rooney and Mckenna 2005: 314).

Today, the "balance between knowledge and resources has shifted so far towards the former that knowledge has become by far the most important factor determining the conditions of living – more important than land, capital and labour" (Cooke and Leydesdorff 2006: 8). Following this string of thought, the term "knowledge-based economy" was coined to stress the importance of learning and interacting – even though it is claimed that the term became something of an umbrella concept and nothing more than a re-phrasing of existing ideas (Godin 2006). Still, with the absolute amount of codified knowledge increasing immensely, national and European innovation policy is concerned with bringing this knowledge to the market. Knowledge is produced for its own sake, assuming that

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the more new knowledge is produced, the higher too the chances of transforming as much as possible of it into commercial products.

In this regard, knowledge policies and happiness policies have hardly anything in common. Engelbrecht (2007: 245) is very outspoken when mentioning that knowledge policies and happiness policy discourses have no common denominator and calls for a closer alignment of the two: "This can be seen to give the knowledge policy discourse direction: knowledge is not accumulated for its own sake, but for a purpose, and that purpose is increased human happiness / SWB. Being clear about the ultimate aim of knowledge-based economies should lead to more appropriate policies."

### **3 Challenges for the knowledge economy**

Knowledge in its various dimensions is crucial for the economic success of countries, regions and individuals. Therefore the human factor is of central importance and SWB-centred public policies are expected to play a vital role in increasing the productivity and profitability of firms. The main rationale, as rightly argued by Engelbrecht, is that "human brains are fragile, somewhat fickle and prone to malfunction, especially when put under pressure and managed inappropriately" (2007: 254). Policies geared towards increasing SWB might decrease the pressure and help people dealing with today's challenges (information overload, fear of unemployment, low family ties, etc.).

The causal relations regarding productivity and stress in knowledge-based economies are anything but clear. The before mentioned increase in mental illnesses in modern industrial countries may be the result of the new work organization and the constant need to produce new knowledge. Cohen (2004), for example, vividly notes that with greater flexibility came the psychic stress and burnout of 24/7. The often cited work-life balance has shifted towards the former and the importance of human capital is not fully acknowledged, either by policy-makers or by firm executives. If increasing levels of knowledge and economic growth do not lead to higher levels of SWB, but instead to higher levels of human stress, then public policy needs to find solutions to cut the Gordian knot of constantly striving for new knowledge and always being innovative and, at the same time, guaranteeing an adequate (probably somewhat smaller) degree of economic growth.

Education and learning are the cornerstone of the growth opportunities of industrialized countries. The innovation system approach characterizes knowledge flows and interaction of knowledgeable actors as key determinants for the occurrence of innovations. Education positively influences income, health and trust, and thus directly main components of SWB. Mainstream knowledge and innovation policy suggests that public investments in higher education and research will produce new knowledge that can subsequently be incorporated in new products and services. Happiness policies, on the other side, highlight the marginal utility of these effects and suggest that public investments in education should be targeted towards people at the bottom of the knowledge distribution, in order to raise the average labour productivity by bringing the low productivity workforce closer to the median. This increases the chances to reduce income inequalities, produce growth and increase SWB.

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## 4 Growth, innovation and happiness

Why is it important to deal with the relationship between happiness and innovation? Since both concepts entail multiple dimensions, there is, of course, more than one story to be told. The first story refers to the notorious but controversial so called "Easterlin paradox". Several studies showed that individuals in wealthier countries are happier than those in poorer countries. There is a statistically significant relationship between happiness and income at a certain point in time and in a given country (Frey and Stutzer 2002). The paradox in its essence states that in developed countries higher income does not seem to translate into significantly higher levels of happiness over time. Long-term time series suggest that, on average, people in America, Japan and Europe have gained sharp increases in real income and wealth over the past three decades, as a result of economic growth, but they are currently not happier than in earlier times (Easterlin 2001, 2005). If we assume that innovations contribute to economic growth (which is probably the first and foremost reason why people engage in innovation activities) then, according to the Easterlin paradox, we face stagnant levels of human happiness.

Easterlin's findings have been regularly challenged. In an early reply, Shin (1980), for example, pointed out that the implications for policy-makers are misleading, especially considering the case of developing nations which would be doomed to low levels of welfare. On the other hand, there are studies that do not find such a straightforward negative relationship between the rise of the knowledge economy and stress. In a reply to Easterlin's contribution to the paradoxes of happiness research, Hagerty and Veenhoven, for example, found evidence that, by using more available indicators, happiness has in fact risen and that income has a positive effect and showed that there has indeed been an increase in so-called "happy life years", especially in the industrialized countries where knowledge production plays a major role (Hagerty and Veenhoven 2003, 2006).

Finally, it has been repeatedly argued - at the latest since the seminal reports by the Club of Rome 1972 on the "Limits to growth" that constant economic growth may also entail negative externalities. Pollution, noise, disruption of family life and the continued reliance on non-renewable resources pose a threat to sustainability and higher consumption by future generations.

## 5 Conclusion

Happiness research has produced a large amount of literature and conclusions on the determinants of our subjective well-being. In this respect, different research avenues or dimensions should be considered or deepened in the future: i) "happinomics indicators", ii) link research-happiness and iii) happiness-driven innovation and development policies.

The first dimension which claims that SWB should be more emphasized by public growth policies has direct consequences on the indicators by which modern societies are governed. Happiness/SWB indicators are important for informing policy-makers, as they contain additional information that goes beyond the conventional economic and social indicators. Of course, happiness depends on a number of determinants which are difficult to define and it is important to note that happiness research is not restricted to the influence of economic factors on SWB alone. In fact, the total number of objective factors that explain happiness is relatively small. Layard (as cited in Engelbrecht 2007) identifies the so-called "Big Seven": family relationships, financial situation, work, community and friends, health, personal freedom, and personal values. The most important findings show

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that non-material aspects of a person's life (social relations among family members, friends, and neighbours) are of key importance for SWB (Frey 2008). In this regard, it is also vital to keep in mind that there are differences in the definition of happiness between cultures as well as that the motivation and drivers of happiness may differ between cultures (Uchida, Norasakkunkit and Kitayama 2004). There may also be differences in similar cultural spheres.<sup>3</sup> Nevertheless, it appears clear that, in terms of indicators, a less materialistic view of well-being would be desirable (Mahadea and Rawat 2008).

The second dimension concerns the output side of research activities. It may also be argued that innovation policy should have a more people-centred approach. Science does indeed have a social function. Therefore, innovation policy should not focus on market success and applicability of research alone, but also on the social dimension of innovations. The term social innovation has recently become a panacea for everything what concerns the usefulness of innovations for societies. The term has, by definition, many meanings and concerns various dimensions, ranging from sustainability to organizational change (for an excellent overview, see Howaldt and Jakobson 2010). However, although the orientation towards improving societal challenges is one of the main issues when referring to social innovation, SWB is hardly ever mentioned explicitly.

Developing a policy agenda which is useful and realizable for public officials that focuses explicitly on happiness and innovation would be the third dimension. Apparently the current growth model entails high costs for treating the vast number of socially caused illnesses. Unarguably, we need to stay innovative and competitive, but this should not be to the detriment of the workforce. Happiness research and its indicators could inform economic and innovation policy-makers better about these issues. In terms of instruments supporting innovation, happiness research offers several starting points. First of all, policies that make SWB a central element will put less pressure on people and offer knowledge workers and researchers more time. Flexible working hours, new forms of work organization and more space for creativity in firms as well as research organizations should translate into a happier workforce, which in turn will lead to better results and successful products and processes. At the same time, it seems important to clearly emphasize local and regional issues in this respect.

This research note nevertheless pointed towards the fact that happiness can be considered to be both an input factor as well as an output factor of the innovation process. Happiness likewise concerns users and producers of new knowledge and there is much to be learned from happiness research for innovation policy, also in terms of indicators, ultimate goals or, in essence, regarding the question of what kind of environment we want to live in.

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<sup>3</sup> A recent poll as part of the Gallup-Healthways Well-Being Index showed that Germans, for example, rate their lives worse on average than adults living in the U.K. and the U.S. do <http://www.gallup.com/poll/149588/Germans-Rate-Lives-Worse-Americans-Britons.aspx>.

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