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Research Report

Lifelong Learning. Education as an economic factor of Universal Basic Income

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FRIBIS
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Policy Debate

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Policy Paper – FRIBIS Winter School Lifelong Learning. Education as an economic factor of Universal Basic Income

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Introduction

Education is often seen as one of the key components to success, happiness, better health, security and, all in all, a more fulfilling life. The promise behind investing in one's knowledge and skills is that of better chances in the labor market, financial security and a more carefree life, at least in the socio-economic sense that one no longer has to worry about meeting one's needs and being able to participate more fully in society. Indeed, education is generally credited with building a more just society. But what does this mean from an educational point of view? And, more importantly, for whom?

One promise that comes up regularly in the discussion around Basic Income is the opportunity of life-long learning, i.e. the idea of going back from work to education and being able to do voluntary work and care work, which is often forgotten since it is unimportant for many in the labor market (paid work). In order to ensure continuous education throughout one's entire life this will play an important role in enabling an individual to have a place in society that he or she finds meaningful. The concept of lifelong learning therefore aims to anchor the capabilities for lifelong learning. But before one can do that, it is important to investigate the core assumption that this principle is built upon. For there are numerous opportunities and programs for further education and training that do not help to improve these living conditions.

Furthermore, from an economist's perspective, education is an input into an economy that should not be undervalued. In fact, education, and life-long learning in particular, occupy a central role in development economics (Glewwe and Muralidharan 2016 :11) and econometric research (AshCard, 1999: 1802). Much along those lines is the economic research on human capital, of which education is one of the main, if not the main, component.

Human capital theory was formulated by the economists Becker and Rosen in 1962 and 1972. In it, they demonstrated that the productivity-related skills of workers can be heightened significantly through education and training (Diebolt und Haupert 2018: 559). Nowadays human capital theory is not only applied to skills but also encompasses expertise (Page und Rauch A. 2001: 4554), even though human capital factor is still very much debated. Health is also considered an important aspect of human capital and many empirical studies have been done on the causal relationship between years of further education and increase in earnings (Card, 1999:1802). Lastly, in the latter years social capital has also been included in the human capital definition (Wilson, Briscoe, 2005: 7).

The educational system in Germany – universal but not unconditional

In Germany one could say we have access to free universal education, or at least basic education within the compulsory school years from grade one to grade ten (more or less equivalent to a high school certificate). Since the 1960s, educational expansion and investment in education has led to increased access to higher education in Germany, evident in a growing number of students at the Gymnasium (the highest secondary school of a threefold system after primary school) and at university. However, the educational system has not become more equal in the sense that everyone has the same chance to enjoy access to higher education. According to the German Federal Statistical Office, 18.5% of the population in Germany has a university degree, 46.6% professional training and 33.5% an Abitur (the highest possible school certificate and university entrance qualification) and 2.9 Million university students. (See references for details)

At the same time, the percentage of people who do not attain any educational qualifications remains relatively constant. But why is this the case? The reason is that the educational background (the type of school or professional qualification of the parents) still strongly predicts what kind of educational path a student will take. In the 21st Social Survey, from 2016, with more than 67,007 students participating, it was shown, that more than half of all students came from an academic family background. The reason for this, which the sociologist Aladain El Mafaalani identified as a paradox, is that expansion of education as well as other educational reforms try to improve the system in a quantitative manner but not in a qualitative one. This paradox is best explained with what he calls the 'elevator effect' (Fahrstuhleffekt). (Mafaalani, 2014: 12; Mafaalani, 2020: 100-107)

Imagine being in an elevator which transports each person two floors higher. Sounds like everyone gets their fair share of opportunities, doesn't it? But not everyone starts on the same floor. While one gets in from floor 6 to 8, another goes from floor 1 to 3. In terms of the educational system, this means that the starting conditions are more decisive than the leveling out of opportunities that many educational institutions strive for. In German this is referred to as the "Primärer Herkunftseffekt" (primary effect of origin). (Mafaalani, 2020: 78)

Additionally, and this is a vital point, in Germany at the age of 10 (after the 4th grade) it is already decided whether a student will attend a Gymnasium, Realschule or Hauptschule. But only the first option gives one a direct opportunity to go to university. At this age, it is most likely that the parents of the students, with their values, wishes and goals for their children, will have a huge influence on the decision-making process. This decision-making according to the status of the parents is statistically visible in the fact that many students with an Abitur (degree to go to university) do not attend university if their parents did not do so. This is called "Sekundärer Herkunftseffekt" (secondary effect of origin). (Mafaalani, 2020: 89)

To sum up, the education system in Germany is equal from a formal point of view, but not in the reality of people's opportunities. This is known as "the inequality of chances".

Faux Amies – The principle of achievement and the principle of distribution

The predominant principle behind a successful path in life is based on achievement. This meritocratic model, which positions/places/categorizes people socially according to their performance in life, is an ideal which has not yet been achieved. Moreover, it is often used to legitimize inequality. The liberal promise that putting enough effort and motivation into following one's goals appears to be blind to another important principle that seeks to determine who is able to develop motivation and effort in the first place – namely, the principle of distribution. („In Deutschland steht das Leistungsprinzip über dem Verteilungsprinzip." - In Germany, the performance principle takes precedence over the distribution principle, Mafaalani, 2020: 62.) While the expansion of access to education is undeniable, a change in the conditions for the majority to receive/get a good education is not evident. As with women's labor participation, the offers are there but they are lying on the other side of the river and the price to pass the water is as high as the inequalities are deep.

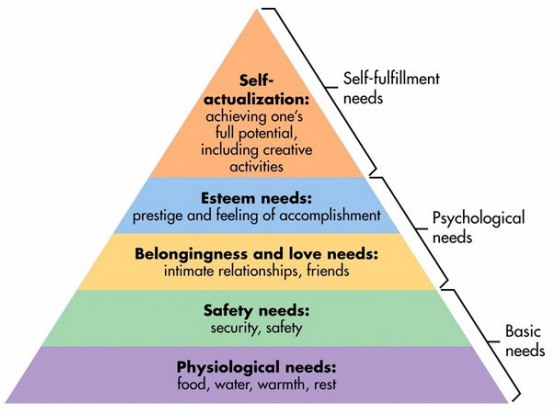
The few who do make it up the ladder (the achievers) demonstrate similar experiences in their biographies. These are characterized by confusion, offence and even insults because of social codes that they are unfamiliar with due to their backgrounds, distance from just those, and a significant other – a supportive person outside the family from another milieu (teacher or trainer) – that supports them. But this minority of 'achievers' can't be the measure or legitimation for the inequality of chances holding back the majority. The essential question, therefore, is: What is the basis for the development of achievement? What resources do people need to achieve?

Basic conditions for achievement from the psychology of learning

Underlying the development of performance are the psychological processes conglomerated in the terms' motivation and self-regulation. The first is defined as a number of psychological processes leading to certain behaviors which need to be reflected, planned, organized and executed. Motivation is orientated towards motives, which are relatively stable value dispositions, and intrinsic and extrinsic goal-directed actions. They can shift in different directions relative to the orientation of the self, striving for control over one's actions (Seel, 2003: 82f.).

Both these processes are in a constant interaction with the environment surrounding the learner. So the distinction between internal and external conditions of learning needs to be studied from both sides - the psychological (internal) view on motivation and self-regulation as well as the sociological, political and economic (external) view on the sociocultural and socioeconomic background (see above: primary and secondary effects of origin).

To illustrate the problems of the interaction between internal and external conditions in the case of lower socioeconomic status, it helps to look at Maslow's hierarchy of needs (1970).



McLeod, 2018, Maslow's hierarchy of needs, 1970

It is clear from this five-level pyramid that only the two highest levels are what we consider learning as performance and achievement. The label self-actualization (or self-realization), describes the intrinsic desire to achieve one's full potential according to one's goals and wishes (motives) on how to live. These imply cognitive needs for curiosity and understanding as well as aesthetics and creativity. But this status is only possible if all the other basic needs, both physiological and psychological, are satisfied. („Bedürfnisse auf den unteren Ebenen der Hierarchie bleiben so lange vorherrschend, wie sie unbefriedigt sind. Erst wenn die angemessen befriedigt sind, können Bedürfnisse der nächsthöheren Ebene motivieren." - Needs at the lower levels of the hierarchy remain predominant as long as they are not satisfied. Only when those are adequately satisfied can needs at the next higher level motivate., Seel, 2003: 83)

And while it is broadly understood that the lowest level of the pyramid, basic physiological needs, like food, water, health, clothes and shelter, have to be ascertained, the next level which is basic security, as well as the basic psychological needs (Deci and Ryan: 2000, 2017) for meaningful relationships (level three), competence (level four), and autonomy (level five), which again are built on this sense of security, are usually not deemed as important even though the necessity for motivation and learning is there.

The need for security is more accurately described as freedom from fear and anxiety and includes the need for safety and balance (ibid.). It reaches beyond the bare minimum of existence, which is only extended to people in our society that are not able support themselves economically for various reasons. One of these can be the lack of economic security in the first place. This lack of security can also be described as a lack of controllability, which was mentioned above as one of the key components for motivation and self-regulation. Going back to the paradox that despite a broad expansion of access to education the (in)equality of chances has not improved at the same time, as described before by the elevator effect, this lack of controllability is learned from an early age, when the family struggles with scarcity of education, economic insecurity and capital, social networks and recognition. This poverty of economic, social and cultural capital goes hand in hand and is best described by the sociological

consequence of a 'Habitus of Necessity' (Habitus der Notwendigkeit). (Mafaalani, 2014: 5) A. Mafaalani explains that this functional logic leads learners to focus on the usability of a learning task rather than focusing on the task itself, which influences motivation and openness to different forms and tasks of learning (ibid.). But what is usability based on?

The logic of usability from a psychological point of view

The idea of usability is further explained by A. Mafaalani by the milieu-specific socialization that influences the goals, perspectives and specific actions of children. (See for example the above-described phenomenon of 'secondary effect of origin - the fact that, even with a certificate qualifying them for university, most students with non-academic parents do not go on to attend university.) Behind the logic of usability lies the orientation towards scarce resources, which is best explained by the psychological theory of scarcity, originating from behavioral economic research on poverty.

Following the definition from Sendhil Mullainathan (Professor of Economics at Harvard University) and Eldar Shafir (Professor of Psychology and Public Affairs at Princeton University) scarcity is defined as a "subjective sense of having more needs than resources" (Mullainthan & Shafir, 2013: 86) or, in other words, the feeling of "having less than you feel you need" (ibid.: 4). The main effect is that scarcity captures the mind in a form of a shortage of mental bandwidth. By this, the authors mean that the mind focusses on whatever resource is scarce, capturing cognitive capacities as attention, executive control and even fluid intelligence, all three essential processes and measures for successful learning. This particular resource can be time, money or friends or, in terms of Maslow's hierarchy of needs, basic security, relatedness, competence, and autonomy.

Scarcity can become apparent at all levels and can cause a downward spiral from a higher level to a lower level when the need of this specific level is scarce, tunneling the mind on that need. This tunneling effect can be understood as the psychological equivalent process to the sociological effect of a 'Habitus of Necessity'.

More equality of chances with Universal Basic Income?

Viewed as an expanded scope of action for living and learning, a universal basic income gives people more freedom and autonomy to take part in educational programs without analyzing them in terms of/considering their usability in order to meet their basic needs and scarce resources. Since/Once the distress of meeting basic psychological needs (level one) and basic economic security (level two) is already covered by a basic income, the individual is freer to participate in other programs, to meet people with the same interests and motives, which ultimately also raises the likelihood of meeting the basic psychological need for relatedness (level 3) as well as competence (level 4) and autonomy (level 5).

Furthermore, this economic security still does not ensure the same starting conditions since some parents still would have a higher socioeconomic and sociocultural capital but, would at least be a way to democratize the process of going through the necessary educational or training processes. One example of this is non-paid internships, which nowadays are something one has to be able to afford. At this point one might ask what the utopia actually is – the meritocratic model of performance and achievement or a universal basic income? The former hasn't worked or changed anything yet, despite decades of promises. So why not try the latter?

Of course, neither a universal basic income nor lifelong learning can offer a solution to all the challenges and problems societies are facing. But they can act as the basis of a physiologically and psychologically fulfilled and free life and offer a way to give people a chance to find, or create, solutions for upcoming challenges.

A lack of uptake of higher education in Germany and its economic implications for German economic growth

As shown above, there are multi-layered psychological and sociological reasons why a considerable part of Germany's population either chooses to refrain from higher education or is unable to access it. This is either due to scarcity constraints or environmental factors, like the educational background of the home they grew up in.

Therefore, one can safely argue that even an economy as rich and diversified as the German one will most likely lose out on mobilizing the full potential of the human capital capacity of its population. Now, this would not be too much of a problem if human capital were insignificant in terms of economic growth. Unfortunately, however, the very opposite holds true, as OECD reports repeatedly emphasise. Even a small significant improvement in the cognitive skill level of a population leads to comparatively much larger gains in GDP growth (OECD 2010: 3, 2006: 152f.). Yet Germany already has a very high human capital stock (World Economic Forum, 2017:8). Keeping this in mind, one can argue that classic suggestions for the country on how to increase its national human capital significantly lose their potency since those measures are arguably either already in place or have at least been thought of by government officials in charge of education. This argument stems from the logic of the Theory of Production as well as the logic of the Solow-Swan model.

Moving on from here, there is a plethora of economic and econometrics research that casually links an increase in enrolment numbers of educational institutions - primary, secondary and tertiary - with an increase in economic growth. This research has revealed that human capital development is one of the most important factors in economic growth (Mankiw et al.,1992: 407, La Fuente und Doménech 2006:1, Diebolt und Haupert 2018: 59f). Moreover, the accumulation of human capital has also been a very important factor in past GDP growth and income distribution (Galor und Tsiddon, 1997: 93). Consequently, when one considers the economies of the 21st century and future economic development, human capital is bound to become an even more important aspect of future economic growth, as it will be dependent on ever more complex technologies and the knowledge economy. On the one hand, these technologies require an ever-increasing base of knowledge to master and innovate from; but on the other hand, they also create a rising demand for employees to keep training themselves. Individuals who are not ready for the future labor market - who have not accumulated enough human capital - will most likely be left out. Adding to this is the fact that researchers (see John P. Murphy 2016; Standing 2011; Aulenbacher et al. 2009) fear that this number of people may not be as insignificant as others deem it to be (Manning und Mazeine 2022:1).

Leaving this discussion aside, however, it is certainly more fruitful to investigate the significance of improved access to tertiary education in more detail and the potential gains that will be entailed for us as a developed economy such as Germany's. In order to do this, it is helpful to first consider where exactly Germany ranks compared to other countries when it comes to the human capital stock, how economically vital human capital for its past economic growth has been in Germany or in similar countries, and what that means for its future economic prospects.

The Global Human Capital Report of 2017 shows a very clear picture of where Germany stands when it comes to its national human capital stock. It is placed in the world's top 10, just behind the Scandinavian human capital powerhouses, Switzerland and the USA.

The Global Human Capital Report subdivides the Global Human Capital Index 2017 into four weighted sub-components: Capacity, Deployment, Development and Know-how, which consist of multiple indicators forming it.

Country	Total Index		Capacity		Deployment		Development		Know-how	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Norway	1	77.12	13	80.46	24	73.18	6	82.63	6	72.22
Finland	2	77.07	8	81.05	68	65.09	1	88.51	2	73.62
Switzerland	3	76.48	28	76.36	42	69.12	2	84.87	1	75.57
USA	4	74.84	22	78.18	43	68.72	4	83.45	13	68.99
Denmark	5	74.40	16	79.37	34	71.41	14	78.65	17	68.18
Germany	6	74.30	29	76.33	40	69.52	12	79.38	7	71.96
New Zealand	7	74.14	18	78.92	27	72.76	8	80.38	22	64.50
Sweden	8	73.95	31	76.21	39	69.60	16	77.10	3	72.89

Global Human Capital Index 2017 (Source: (World Economic Forum 2017):8)

Another global human capital indicator, the World Bank's human capital index, assigns a similar rank to Germany, though its methodology is a bit more difficult to decipher and display (World Bank, 2023).

However, it goes without saying that Germany can still improve on indicators of primary and secondary education system quality, which are part of Deployment sub-component. These measures have been discussed by the German public ever since the introduction of the PISA studies in the OECD countries in the early 2000s. Germany's persistent employment gap in the European context is another main contributor to the sub-component. The challenge that the problem posed to the public administration has been dealt with by successive governments, albeit with varying results.

Another weaker, though more often overlooked, aspect of Germany's total human capital index is the capacity component of Germany's total human capital index (World Economic Forum 2017: 98). In it, the tertiary education attainment rate, with a score of 26.4 per cent of the 25-56 years population cohort, compares especially badly to its other top ten neighbours in the table.

This statistic is in line with the ones from the Statisches Bundesamt (the Federal Statistical Office of Germany) at the beginning of the text. Access to higher education has been expanded in total numbers, but its availability is limited to a minority of the population, albeit a growing one. A look at more recent OECD data on the population percentage with a tertiary university degree also confirms this picture. (OECD, 2023: https://data.oecd.org/eduatt/population-with-tertiary-education.htm)

As mentioned above with regard to human capital in Germany, a question that is important to ask is how economically vital human capital has been in the past, especially in regard to tertiary education attainment for Germany and what we would to do to predict future economic growth potential with it. There are various ways to approach this subject, but most of them revolve around the investigation of how human capital, arguably through/due to total factor productivity (TFP) (See: Benhabib und Spiegel 1994: 143ff) or total labour productivity (Blundell et al. 1999: 14ff), has influenced the country's economic growth path in the past and will do so in the future.

To be able to do this, it is necessary to turn to economic theory and econometric research on the subject. As mentioned before, and contrary to classical economic growth theory, according to human capital theory by Becker and Rosen, human capital does matter for economic growth.

The endogenous growth theory is derived from that (make it explicit what the previous "that" is referring to) line of research and thinking and therefore argues in a similar way. In the endogenous growth model, exogenous factors, such as physical stock accumulation, capital growth, and even technological change, are not nearly as important for economic growth as a continued investment in human capital, with its positive spill-over effects on economic growth. Proponents of this growth model back up their claims with econometric cross-country panel data studies, showing that the continued investment into the human capital stock in the G7 countries is one of the most accurate explanations of why they have such thriving economies today (Mankiw et al., 1992: 208f.). In essence, they found that the more schooling a countries' labour force has, the

more economic growth an economy can be expected to have in the future. Benhabib and Spiegel (1994), by also applying a Coob-Douglas production function to it (reference unclear to me) like Mankiw, Romer and Weil before, came to a slightly different result. They found that the main channel through which human capital affects economic growth is through the growth of total factor productivity (Benhabib and Spiegel, 1994: 143). However, they followed a traditional neoclassical economic growth model and therefore did not include human capital in their initial economic growth formula (Rehak, 2020: 3). Applying an endogenous growth model theory to an even more refined empirical study (Wilson, Briscoe, 2005: 40), Bassanini and Scarpetta (2003) investigated OECD data on the relationship of education and economic development from 1971 to 1988. They concluded that one more year of schooling as an input into the labour force resulted in an average 6 per cent per capita GDP increase (Bassanini und Scarpetta, 2003: 26). Thereby, their research supported the findings of Romer (1986), Mankiw et al (1992), Lucas (1988) and Barro and Sala-i-Martin (1995) that social return to scale on state investment in educational institutions shows to have at least a constant, but predominantly increasing returns to scale. This means that a government gets more economic value back on its educational spending than it spends. Furthermore, they also maintained that, in some cases, the positive spill-over effect of the rise in human capital can be so lasting that it may put an economy which consistently reinvests in education on a permanent path of economic growth. Contrary to other cross-country studies (Temple, 1999: 113f.), and even other OECD cross-country studies, the results of this study are largely transferable to the German context due to their approach, choice of countries and empirical method (Wilson, Briscoe, 2005: 40).

From 1970 to 1980 the West German Economy was dealing with two severe energy crises, similar to what it faces now (World Bank, 2023). Since West Germany would soon cease to exist as such and become the Federal Republic of Germany, in 1990, the paper unfortunately does not provide data for the time span from 1980 until 1990.

A closer look at West Germany's output growth rates from 1970 to 1980 shows that much of it was indeed driven by a growing human capital stock, even though its size is very likely to be correlated with its then experienced population growth. The graph also depicts another important aspect of human capital growth that is often brought up by human capital researchers, namely, that its positive spill-overs effected economic growth positively even during energy, or otherwise induced, economic crises.

Although the authors provide no data on the relationship of human capital growth and output growth in Germany from 1980 until 1990, they mention that human capital growth was one of the main sources of output growth in many other countries in the period when their policy was geared towards investment in – especially higher– education. Spain and Italy are a good example of this in the graphic. (Other economists especially stressed that it is the raising of the tertiary education attainment level that is the main driver of the positive influence of education on economic growth, see Gemmell 1996: 9, Badinger und Tondl 2011: 215, Wang und Liu, 2016: 9.)

If we look at Germany's economic growth rate in the 1990s, however, there is limited GDP growth, with its highest growth point at 2,4% (World Bank, 2023) And this is also strongly induced by a cyclically positive rebound effect from the -1% of the year before. One of the main explanations for the low economic growth rate during that time span is summed up as follows by an author from the Kiel Institute for the World Economy:

"[Germany has] an ineffective system for human capital formation with the exception of vocational training and an erosion of the export position with a reduced attractiveness for foreign direct investment. The issue is raised whether Germany belongs to a new category of economies, the NDCs, the Newly Declining Countries." (Siebert (2003): 1)

Another renowned German economic research institute, the IfO Institute, commenting on the reasons for the country's slow economic growth at the time, struck a similarly sober tone. They confirmed that Germany is struggling/was struggling economically due to decreasing working hours and, above all, to no growth in human capital formation (Klös and Plünnecke 2003: 39). Furthermore, they added that the future outlook for increased human capital growth looked dire due to the low skills of German students and the lower than OECD average private investment in education (Klös and Plünnecke 2003: 41). This trend, even though reported 20 years ago, has not changed significantly.

If you contrast this with an analysis of historical economic growth data with a clear message "that human capital formation is an important driver of economic development in the long run" (Diebolt and Hippe 2019: 558), the question if Germany's losses on economic growth as a result of its low tertiary education attainment rate are obvious It does, and will continue to do so in the future if it continues on this path.

Since most of the European governments strive to increase the availability of higher education for their citizens, why should Germany not strive to remove some of its barriers to access them once and for all? Currently, there are few policy suggestions that are able to assure this universally. A UBI, however, may be able to keep this promise in an all-encompassing way. A UBI is able not only to deal with health-, especially mental health-related problems, but also with the socio-economic implications of economic scarcity. Besides this, going back to Maslow's hierarchy of needs, it could create the very environment that is necessary for low-income households and many other individuals to be able to apply their formerly occupied brain band-width towards successful learning.

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