

Continued Education in Germany: The Roles of Culture and Institutions

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Abstract

I study the effect of culture and institutions on continued education activities of immigrants in Germany. To identify a causal effect, I rely on two different sources of variation: (i) differences in immigrants' cultural backgrounds and (ii) differences in educational leave policies at the federal state level. I find that immigrants from more patient cultures are more likely to engage in continued education as adults. Introducing a legal claim on educational leave also has a positive impact on engagement in continued education. This impact is smaller for individuals from more patient cultures suggesting that culture substantially impacts how individuals respond to educational policies.

Keywords culture · immigration · patience · continued education

1 Introduction

Investment in education is a key determinant of individuals' future earnings (Mincer 1974). As technological change advances, the correlation between education and earnings is likely to increase even further (Acemoglu 2002). At the same time, the increasing speed of technological change causes rapid and frequent changes in skills needs across all occupations and industries (OECD 2021). Whereas in previous decades, it was optimal to invest in education at the beginning of the career, i.e. at school and college, to maximize the time in which the returns to education could be enjoyed, this is no longer true in the age of digitalization and automation. When the set of relevant skills continuously changes, it is necessary to invest in education throughout the entire life cycle. Promoting continued education of their workforce is thus a key goal for policy makers all over the world.

However, little is known on what affects individual's investment in continued education. In this paper, I study whether public institutions can stimulate engagement in continued education and how this is related to an individual's cultural background. As a country's culture and its institutions are highly intertwined, disentangling them is challenging. To identify the causal impact of each of these factors, I rely on a unique identification strategy that exploits variation in (i) cultural background and (ii) institutional setting. Germany is an ideal testing ground for this research question. As one of the world's technologically most developed countries, establishing sufficient opportunities for continued education is essential for German policy makers. Since educational policy differs across the 16 German federal states, comparing investments in education under different institutional conditions is possible. On top of that, Germany is home to a wide variety of immigrants from different cultural backgrounds. These differences in cultural backgrounds allow to isolate the effect of culture from that of institutions. Therefore, I can assess the effect of origin country culture and resident country institutions on immigrants' probability to engage in continued education.

Culture is the set of beliefs and preferences that are prevalent in a society. Using the Global Preferences Survey (Falk et al. 2018), I focus on the one dimension of this set that is of particular importance for investments in education: patience. Patience is measured as a person's willingness to forego payoffs today for greater payoffs in the future. This discount rate of future payoffs differs across cultures. Individuals from more patient cultures attach less weight to the costs of acquiring education (i.e. foregone wages or leisure) and more weight to future payoffs (i.e. higher wages or increased employment opportunities) than their counterparts from less patient cultures. Hence, individuals from more patient cultures are expected to be more likely to invest in continued education.

Whereas culture influences how costs are weighted against future payoffs, the institutional setting influences the costs of continued education directly. As continued education activities are performed after entry in the labour market, their opportunity costs are particularly high. If employers do not pay their employees during training, workers have to sacrifice their leisure

or suffer from earnings losses during the educational program. The government can substantially reduce these costs by guaranteeing workers paid educational leave. In 1976, the German government ratified a convention of the International Labour Organisation (ILO) that establishes a legal claim for such paid educational leave policies (Deutscher Bundestag 1976). However, educational policy in Germany is subject to the legislation of the federal states. That is, federal states independently decide on their educational policies. Thus, the educational leave policy was not put into force at the national level. Instead, the individual states implemented the reform themselves, creating a unique variation in timing of paid educational leave policies.¹ This variation allows investigating the effect of institutions on continued education.

Following Figlio et al. (2019), I employ an innovative identification strategy that allows to isolate the effect of culture on immigrants' investment in continued education. After moving from one country (origin country) to another (resident country), immigrants make their educational investment subject to the institutions of their new resident country. Although they no longer live in their origin country, their basic values and beliefs were formed by this country's culture. Consequently, their decision to invest in education in the resident country is influenced by the patience of their origin culture. I exploit this fact and attribute each immigrant the average patience of their origin country. This way, I can estimate the effect of origin country culture on immigrants' educational investments. Combining this identification strategy with the variation in timing of educational leave policies makes it possible to relate the effect of weight attached to present costs (cultural aspect) to the effect of variations in costs (institutional setting).

I exploit the 2012 to 2018 waves of the German Microcensus which is a rich individual level dataset that covers 1% of the German population every year. It includes in-depth information about respondents' educational investments like the participation, duration and subject of their continued education activities. Detailed information on migration background enables to identify respondents' country of origin as well as their time of arrival in Germany, their main reason for migration and their parents' origin country. A large set of socio-demographic and occupational characteristics can be employed as control variables and to investigate effect size heterogeneities, for example with respect to gender or employment type.

I find that culture has substantial effects on the investments in continued education of German immigrants. Individuals that come from origin countries with more patient cultures are significantly more likely to engage in continued education. If patience increases one standard deviation above the world mean, immigrants' training probability grows by 4 percentage points. The effect of institutional regulations on investments in continued education is also positive. In states where such legislation is in place, immigrants are 0.7 percentage points more likely to engage in continued education. When investigating the interaction between both factors, the effect of paid educational

¹Of the 16 German states, three states adopted such a policy within the the time period investigated in this paper. Eleven states had educational leave policies in place before the investigated time frame, whereas two states do not have any regulations in place yet. There is an ongoing debate on whether this violates the requirements of the ILO convention.

leave policies is smaller for immigrants from more patient cultures. This finding is in line with the idea that individuals from more patient countries attach less weight to present costs and more weight to future payoffs than their counterparts from less patient countries.

Previous literature has focused on analysing the effect of origin country culture on educational outcomes of students instead of adults. Figlio et al. (2019) find that students whose parents come from more long-term oriented cultures achieve better schooling outcomes. Hanushek et al. (2020) find that origin culture's patience impacts the educational achievements of students positively, whereas risk-taking has negative effects. I contribute to this literature by shifting the focus from education achieved at the beginning of the career to educational investments throughout the life cycle. Furthermore, I go beyond the analysis and add an institutional perspective. This way, I can assess not only what individual background characteristics determine engagement in continued education, but also how this engagement can be fostered via public policy. The variation in educational policy across German federal states has been widely used in the literature (see Hübener, Kuger, and Marcus (2017) for an example). However, the focus of this literature is on schooling reforms, not on the regulations that are in place with respect to continued education. Continued education policies that target workers in paid employment have been analysed in the literature far less frequently. Schwerdt et al. (2012) provide a notable exception. Analysing a randomized adult education voucher program in Switzerland, they find that the policy has only moderate effects on the propensity to engage in continued education and no effects on labour market outcomes. Adding a cultural component to the evaluation of educational policies is important as it can explain differences in how strongly individuals respond to these policies. Consequently, taking this cultural component into account is crucial for the design of effective policy measures.

2 Conclusion

This paper sheds light on the role of a specific cultural trait – namely patience – for the educational investments of adults. With an identification strategy focusing on immigrants with heterogeneous cultural backgrounds, I isolate the effect of patience from other determinants of investments in continued education. Furthermore, I investigate how the institutional setting impacts the individual probability to engage in continued education. I find that both culture and institutions as well as their interaction play an important role.

Continued educational investments are of great importance for individuals' personal career trajectories as well as for the development of a country's economy. As the upcoming decades will be characterized by an unprecedented speed of technological change, it will be key for policy makers to enable their workforce to deal with continuously changing skill requirements. To foster lifelong learning with effective public policies, it is crucial to identify the circumstances under which individuals become engaged in continued education. This paper contributes by showing that culture and institutions matter for the engagement in continued education and that their interrelation with each other can have important implications for policy makers.

Future work will go one step further and analyse the labour market outcomes of those who participated in continued education. This way, one can investigate not only the participation in continued education but also the returns to this type of education. This will shed further light on the factors that make promoting continued education a successful policy tool to equip workers with the skills they need in the age of digitalisation and automation.

References

- Acemoglu, Daron (2002). “Technical Change, Inequality, and the Labor Market”. In: *Journal of Economic Literature* XL.7-72. ISSN: 0022-0515. DOI: [10.1257/0022051026976](https://doi.org/10.1257/0022051026976).
- Deutscher Bundestag (1976). *Gesetz zu dem Übereinkommen Nr. 140 der Internationalen Arbeitsorganisation vom 24. Juni 1974 über den bezahlten Bildungsurlaub*.
- Falk, Armin, Anke Becker, Thomas Dohmen, Benjamin Enke, David Huffman, and Uwe Sunde (2018). “Global Evidence on Economic Preferences”. In: *The Quarterly Journal of Economics* 133.4, pp. 1645–1692. ISSN: 0033-5533. DOI: [10.1093/qje/qjy013](https://doi.org/10.1093/qje/qjy013).
- Figlio, David, Paola Giuliano, Umut Özek, and Paola Sapienza (2019). “Long-Term Orientation and Educational Performance”. In: *American Economic Journal: Economic Policy* 11.4, pp. 272–309. ISSN: 1945-7731. DOI: [10.1257/po1.20180374](https://doi.org/10.1257/po1.20180374).
- Hanushek, Eric A., Lavinia Kinne, Philipp Lergetporer, and Ludger Woessmann (2020). “Culture and Student Achievement: The Intertwined Roles of Patience and Risk-Taking”. In: *NBER Working Paper Series* 27484. DOI: [10.3386/w27484](https://doi.org/10.3386/w27484).
- Hübener, Mathias, Susanne Kuger, and Jan Marcus (2017). “Increased instruction hours and the widening gap in student performance”. In: *Labour Economics* 47, pp. 15–34. ISSN: 0927-5371. DOI: [10.1016/j.labeco.2017.04.007](https://doi.org/10.1016/j.labeco.2017.04.007).
- Mincer, Jacob (1974). *Schooling, experience, and earnings*. NBER. ISBN: 0-87014-265-8.
- OECD (2021). *OECD Employment Outlook 2021: Navigating the COVID-19 Crisis and Recovery*. Paris: OECD Publishing. ISBN: 9789264340336. DOI: [10.1787/5a700c4b-en](https://doi.org/10.1787/5a700c4b-en).
- Schwerdt, Guido, Dolores Messer, Ludger Woessmann, and Stefan C. Wolter (2012). “The impact of an adult education voucher program: Evidence from a randomized field experiment”. In: *Journal of Public Economics* 96.7-8, pp. 569–583. ISSN: 0047-2727. DOI: [10.1016/j.jpubeco.2012.03.001](https://doi.org/10.1016/j.jpubeco.2012.03.001).