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Success Despite Starting Out at a Disadvantage: What Helps Second-Generation Migrants in France and Germany?

by Ingrid Tucci, Ariane Jossin, Carsten Keller, and Olaf Groh-Samberg

The educational and employment trajectories of migrant children in France and Germany are extremely diverse. The few successful ones dominate the public eye. Yet successful biographies of young adults with a migration background are in no way a negligible exception. However, the picture is different in the two countries: while in France more migrants' descendants manage to reach their (secondary?) general qualification for university entrance, in Germany they are overrepresented particularly at the *Hauptschule* (general secondary school). It is, however, considerably more difficult for these young people in France to gain a long-term foothold in the labor market, while in Germany they often take the chance to acquire a vocational qualification and have better job opportunities.

As part of a three-year research project, the question examined was which social and institutional factors can stabilize educational attainment and professional orientation. On the basis of qualitative interviews, which were conducted with young adults with a migration background in four disadvantaged areas of Berlin and Paris, it is possible to name three factors that play an important role in the success and/or the stabilization of early educational and employment trajectories: the support provided by significant third parties, entry into milieus which are more socially and culturally diverse, and the prospect of a "second chance."

As countries with a high number of migrants, Germany and France are both faced with the task of integrating migrants and their children as well as possible. The civil unrest of November 2005 in the French suburbs showed how seriously the experience of social inequalities, discrimination, and segregation can jeopardize social cohesion. Now, it is essential on both sides of the Rhine to prevent ethnic and cultural differences from being reinforced.

Different Education Systems ...

Research conducted to date already shows that, on average, migrant children in both countries have lower qualifications than their peers without a migrant background. At the same time, international comparative studies have proven that institutional frameworks have an impact on the opportunities for participation of the second-generation. This can also be backed up by a comparison of the German and French education systems. In Germany, children do not normally go to school until the age of six and are placed in different school tracks relatively early—after the primary level. This institutional separation is frequently cited as a reason for the particularly pronounced educational inequalities between children with different social and ethnic backgrounds.

¹ For an overview of the results of research for Germany, see Clauss, S. and B. Nauck, "The Situation Among Children of Migrant Origin in Germany," Innocenti Working Papers 14 (2009). For France, see Kirszbaum, T., Y. Brinbaum, and P. Simon, "The Children of Immigrants in France: The Emergence of a Second Generation". Innocenti Working Papers 13 (2009).

² See, for example, Crul, M. and H.Vermeulen, "The second generation in Europe," International Migration Review, 37 (4), (2003): 965–986; Heckmann, F., H.W. Lederer, and S. Worbs: Effectiveness of national integration strategies towards second generation migrant youth in a comparative perspective (EFFNATIS). Final Report to the European Commission. Bamberg (2001).

³ See Tillmann, K.J., "Viel Selektion—wenig Leistung: Der PISA-Blick auf Erfolg und Scheitern in deutschen Schulen". K. Böllert. (ed.): Von der Delegation zur Kooperation. Bildung in Familie, Schule, Kinder und Jugendhilfe. (Wiesbaden: 2008): 47–66.

Box 1

A Franco-German Research Project

The research project entitled "A Franco-German Comparison of Professional Strategies and Status Passages of Young Adults with a Migration Background" explores what helps young people with a migration background to have successful educational and professional careers. What are the prerequisites for successful trajectories?

In an attempt to answer these questions, studies were carried out on the life courses of young men and women of Turkish and Arab origin in Germany and of North African and Sub-Saharan origin in France. To date, this biographical perspective has been rare in the approaches and empirical work of migration and

- 1 The research project entitled "A Franco-German Comparison of Professional Strategies and Status Passages of Young Adults with a Migration Background" is jointly funded by the German Research Foundation (DFG) and the French National Research Agency (ANR). Many thanks to Lisa Crinon, Florian Mönks, Wenke Niehues, Tim Sawert, Agnieszka Sommer, and Deniz Yildirim for their hard work on the analyses
- **2** Trajectories are considered to be successful if the respondents themselves are satisfied with their life course, also in retrospect, because they have achieved a certain social stability (obtaining a qualification, entering gainful employment, etc.).

integration research.³ The project is divided into two major parts: on the one hand, quantitative data from longitudinal studies on educational and employment trajectories were analyzed statistically. On the other hand, as part of a qualitative study in 2009 and 2010, a total of 175 young adults with a migration background in two disadvantaged areas in Berlin and two in Paris were interviewed—young men and women with successful as well as difficult life courses.

While the quantitative results presented here give an overview of typical patterns of educational and working careers of young people with a migration background, qualitative analyses can be used to determine major factors that have brought about a turning point in their lives, or had a positive impact on their life course.

In France, on the other hand, children normally start attending pre-school at a considerably younger age—at three at the latest—and not only go through elementary school together but also the subsequent <code>collège</code> right up until the age of 15. At the end of <code>collège</code>, an "orientation" takes place in France as well, and thus separation into different educational pathways. Some of the students follow the general educational trajectory and others the vocational one. After their first year at grammar school, those who follow the general trajectory will prepare either for the general higher education entrance qualification or the technical high-school diploma.⁴ In the vocational trajectory, short practical training courses are provided, as well as a vocational school-leaving certificate. In contrast to the vocational training in Germany, the

short professional training courses in France are however considered to be for "dropouts" and seen as inferior. This debasement was further reinforced through the political objective that 80 percent of all students should obtain the *baccalauréat* (secondary-school leaving certificate), which has led to different forms of the French *baccalauréat*, ranging from the general one (*bac général*) to the technical one (*bac technologique*) and the vocational one (*bac professionnel*).

Despite the above-mentioned differences in the education systems, in both countries there is a similarly sized share of less than 15 percent of young adults who have obtained no school or vocational qualifications at all. Young people in Germany can obtain some of the qualifications they did not manage to acquire at school within the framework of the "transition system" or training schemes run by the employment office. Numerous schemes and programs are targeted at young people with a migration background in particular.

³ See Wingens, M., H. de Valk, M. Windzio, and C. Aybek, "The sociological life course approach and research on migration and integration," ibid. (eds.): A life-course perspective on migration and integration, (Dordrecht: 2011): 1-26.

⁴ When studying for the technical high-school diploma, the grammar school students acquire practical knowledge as well as theoretical knowledge. The baccalauréat technologique is comparable to the German Fachabitur (technical high-school diploma which serves as a qualification for entrance to universities of applied sciences) but this baccalauréat theoretically opens all doors to university education. However, graduates often have difficulty advancing, (see Blöss, T. and V. Erlich, "Les nouveaux acteurs de la sélection universitaire: Les bacheliers technologiques en question." Revue française de sociologie, 41 (4) (2000): 747-775.

⁵ See Autorengruppe Bildungsberichterstattung: Bildung in Deutschland 2010. Bertelsmann Verlag. 2010.

This opportunity does not exist in France, or only to a very limited extent, partly because the egalitarian principle of the French Republic precludes special schemes to support migrants and qualification schemes provided by what are known as *missions locales*⁶ have a more limited range.

... Unequal Educational Opportunities

The education systems and social policy frameworks are different in both countries. Indeed, they also lead to different educational trajectories. Using longitudinal data and pattern recognition processes, it is possible to study and group educational trajectories and initial career paths with regard to typical patterns. Tables I and 2 show how the groups from the different countries of origin studied are distributed along the different trajectories.

France: Many Children of Immigrants Heading Towards Their School-Leaving Certificate

As can be seen from Table I, children of North African and Sub-Saharan migrants in France are overrepresented in the less prestigious vocational trajectories of the education system (Trajectory 5). They themselves often perceive this career path as frustrating or forced upon them. They are just as frequently represented in the technological trajectory of the general educational trajectory (Trajectory 3), which gives some of them access to university. In the more prestigious trajectory, which leads directly to university via the *baccalauréat général*, however, they are somewhat underrepresented (Trajectory I): while one-fifth of them follow this educational trajectory, almost 40 percent of young people without a migration background achieve the *baccalauréat général*.

Table 1

Educational Trajectories between the Ages of 11 and 18-France

		France	Maghreb	Sub-Sahara
Trajectory no	Brief description of the trajectory	N = 12911	N = 1165	N = 256
1	General maturity certificate and university	38.5	20.3	19.1
2	Technical high-school diploma and university	7.5	6.7	7.4
3	Technical high-school diploma	12.4	16.6	16.4
4	Short vocational training course	15.6	16.7	12.1
5	Deferred vocational training course	21.4	31.7	28.5
6	Early school leaver	4.5	8.1	16.4
	Total	100	100	100

Sources: Panel des élèves du second degré, 1995; DEPP; calculations by DIW Berlin.

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In France, only half as many descendants of immigrants as young people without a migration background manage to obtain the general higher education entrance certificate and then go directly to university.

Table 2

Educational Trajectories between the Ages of 11 and 18-Germany

		Germany	Turkey
Trajectory no.	Brief description of the trajectory	N = 2091	N = 282
1	Attendance of grammar school	22.3	5.3
2	Transfer to grammar school	12.0	6.4
3	Transfer from grammar school to intermediate school (Realschule)	4.7	0.7
4	Attendance of intermediate school	18.3	11.7
5	Transfer from general secondary school to intermediate school	14.1	9.6
6	General secondary school followed by vocational training	7.2	8.2
7	General secondary school with transitional problems	14.7	50.7
8	Attendance of comprehensive school	6.9	7.5
	Total	100	100

Sources: SOEP 1984-2009; calculations by DIW Berlin.

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In Germany, over half of all students of Turkish origin end up in the general secondary school and subsequently struggle with transitional problems.

Germany: A High Number at General Secondary Schools, Few Gaining University Entrance Qualifications

As far as educational trajectories in Germany are concerned, what stands out is the strong overrepresentation of children of Turkish migrants in the general seconda-

⁶ Missions locales are state-run centers that promote the social and professional integration of young people.

⁷ The results given in this report are descriptive. For multivariate analyses that take social background into account, see the following article: Groh-Samberg, O., A. Jossin, C. Keller, and I. Tucci, "Biografische Drift und zweite Chance. Zur institutionellen Strukturierung der Bildungs- und Berufsverläufe von Migrantennachkommen in Deutschland und Frankreich". (submitted manuscript, 2011). For Germany, we do not have any longitudinal data about young adults of Arab origin.

⁸ See Caille, J.-P., "Perception du système éducatif et projets d'avenir des enfants d'immigrés". Éducation et formations 74 (2007): 117-142 and Silberman, R. and I. Fournier, (1999): "Les enfants d'immigrés sur le marché du travail: les mécanismes d'une discrimination sélective" Formation emploi, 65, 31-55.

ry school tracks with subsequent problems entering vocational training and the labor market (Trajectory 7): for children of Turkish migrants, the share is around 50 percent, compared to only around 15 percent among young people without a migration background. For the tracks of the Hauptschule (general secondary school) or the Gesamtschule (comprehensive school) followed by vocational training (Trajectories 6 and 8), young people of Turkish origin are proportionally represented. But only around 5 percent of them of them are on the Gymnasium (grammar school) track—for children without migration background, this figure is 22 percent. Nevertheless, 6 percent (as opposed to 12 percent of young adults without a migration background) switch to a grammar school during the course of their education. Overall, it is apparent that children of Turkish migrants are represented in educational trajectories with a move to a different type of school (regardless of whether this is to a higher or lower level) considerably less often than children without a migration background.

Overall, a high degree of ethnic segregation can be seen in the German education system. The French education system offers the chance of an academic education with the *baccalauréat technologique*. At the same time, in France, there is however, also a strong overrepresentation of young people of North African and Sub-Saharan origin in the trajectory "Early school leaver" (Tra-

9 Young people in this trajectory leave school at the age of around 14 or 15, that is, without any qualifications.

jectory 6), which indicates that in the French education system, it is difficult to catch early school leavers and to give them a second chance.

The Transitions into the Labor Market of the Descendants of Immigrants Also Vary

While the ethnic segregation is significantly greater in the German education system than in France, this difference can surprisingly no longer be seen with regard to entry into the labor market. At least two important differences between the countries are clear from the results in Tables 3 and 4.

Descendants of Immigrants in Germany are More Successful at Entering the Labor Market than in France

In France, a particularly precarious career path (Trajectory 6) becomes clearly evident, characterized in the long term through repeated phases of unemployment and precarious employment: around 23 percent of young adults of North African origin and 16 percent of young adults of Sub-Saharan origin end up on this path. For young adults of French origin, this figure is 14 percent. Furthermore, children of North-African and Sub-Saharan immigrants in France frequently end up in conti-

Table 3

Entry into the Labor Market between the Ages of 18 and 25-France

T	Drief description of the American	France	Maghreb	Sub-Sahara
Trajectory no.	Brief description of the trajectory	N = 11086	N = 854	N = 103
1	Grammar school attendance followed by university studies	26.4	24.6	16.5
2	Longer educational trajectory followed by entry into the higher the labor market segment	22.6	14.7	22.3
3	Short educational trajectory followed by entry into the higher labor market segment	5.7	3.9	3.9
4	Longer educational trajectory followed by entry into the precarious labor market segment	9.9	9.8	12.6
5	Short educational trajectory followed by entry into the precarious labor market segment	21.2	23.4	28.2
6	Short educational trajectory with long periods of unemployment and positions in the precarious labor market segment	14.2	23.5	16.5
	Total	100	100	100

Sources: Panel des élèves du second degré, 1995, DEPP; calculations by DIW Berlin.

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In France, significantly more young people with Maghreb or Sub-Saharan roots end up in the precarious labor market segment or unemployed after a short educational trajectory than do young French people without a migration background.

nuously precarious employment (Trajectory 4) even after a longer educational trajectory.

In Germany, around 40 percent of young adults of Turkish origin initially end up in the precarious labor market segment (Trajectory 4) after vocational training as well. For young adults without a migration background, this figure is approximately one-third. However, 15 percent of migrant children still manage to advance into the higher labor market segment (Trajectory 3), as opposed to 22 percent of their peers of German origin. Furthermore, 11 percent of the second-generation migrants choose the longer educational trajectory with university studies (Trajectory 1).

Therefore, an ethnic disadvantage can be seen in both countries—albeit at different points in young people's lives. While it does not clearly emerge in France until the transition into the labor market, ethnic segregation in Germany becomes apparent at an early point in the education system. Vocational training in Germany facilitates the transition into the labor market: here, too, no precarious, significant pattern can be seen like in France. There is, however, a cluster of young adults not in employment (Trajectory 5) in Germany only, comprising mainly of women, who neither had work nor were looking for work throughout most of the period under study.

Young Women of Turkish Origin Cannot Draw on Their Workforce Potential in Germany

In the cluster of inactive persons, women of Turkish origin in particular are overrepresented. Specific gender stereotypes might play a role here, as well as individual orientations with regard to starting a family.

This result points to the particular difficulties faced by many young women of Turkish origin and to the consequent unused workforce potential.

The quantitative results clearly show that although successful educational and employment trajectories for the descendants of migrants in both countries are rarer than for their French or German peers, these are still not a negligible exception. The qualitative view of the biographies of young adults with a migration background who have completed a relatively successful educational or labor market career makes it possible to identify what factors in their lives have played a role here.

Table 4

Entry into the Labor Market between the Ages of 18 and 25— Germany

Traiactanina	Brief description of the trajectory	Germany	Turkey
irajectory no.	brief description of the trajectory	N = 1759	N = 281
1	Grammar school attendance followed by university studies	25.1	11.4
2	Grammar school attendance followed by vocational training and entry into the labor market	14.7	6.4
3	Vocational training followed by entry into the higher labor market segment	21.8	15.3
4	Vocational training followed by entry into the precarious labor market segment	32.6	42.3
5	Short educational trajectory followed by inactivity	5.8	24.6
	Total	100	100

Sources: SOEP 1984-2009; calculations by DIW Berlin.

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Around a quarter of young adults of Turkish origin are out of work between the ages of 18 and 25.

Factors Leading to Successful Careers

In both the English-speaking and German-speaking worlds, a number of studies on educational climbers with a migration background have been published over the past few years. These studies verify the particular role of higher educational aspirations in migrant families, as well as the significance of social capital in the form of social control, discipline and normative expectations. On the basis of the results of our qualitative study conducted in Berlin and Paris (box 2), at least three factors for the successful educational and employment trajectories of second-generation migrants can be named:

 support provided by "third parties" who take on the function of a mentor.

¹⁰ See Portes, A. and P. Fernández-Kelly, "No Margin for Error: Educational and Occupational Achievement among Disadvantaged Children of Immigrants" The Annals of the American Academy of Political and Social Science 620 (1), (2008): 12–36; Apitzsch, U. and M.M. Jansen, (ed.), Migration, Biographie und Geschlechterverhältnisse; (Münster: 2003); Raiser, U. Erfolgreiche Migranten im deutschen Bildungssystem - Es gibt sie doch, (Münster: 2007); Koller H.C. (ed.) (2009): Adoleszenz—Migration—Bildung, Wiesbaden; Tepecik, E. Bildungserfolge mit Migrationshintergrund: Biographien bildungserfolgreicher MigrantInnen türkischer Herkunft. (Wiesbaden: 2011).

¹¹ One study based on quantitative data verifies the high aspirations with regard to migrant families in Germany. See Becker, B., "Bildungsaspirationen von Migranten. Determinanten und Umsetzung in Bildungsergebnisse" MZES Arbeitspapiere 137 (Mannheim: 2010).

Box 2

Quantitative Analyses: Data and Methods

The analyses for Germany are based on the data of the German Socio-Economic Panel (SOEP). The SOEP is a longitudinal study that has been conducted annually since 1984 and carried out on behalf of DIW Berlin by the fieldwork organization TNS Infratest Sozialforschung in Munich. The most recent SOEP data used for the project are from 2009.

For France, the basis for analysis of educational pathways was the panel des élèves du second degré 1995 (DEPP¹), and the Enquête Génération 1998 conducted by Céreq² was used for processes of entering the labor market. The studies went up to 2002 and 2005, respectively. Second-generation migrants were either born in Germany or France and their parents migrated, or they themselves migrated before the age of 12. A qualitative survey was conducted in addition (see box 3). Respondents were from the same generation also observed in the quantitative studies.

While the educational trajectories take into consideration the sequence between the different educational

- 1 Direction de l'Evaluation, de la Prospective et de la Performance.
- 2 Centre d'Etudes et de Recherches sur les Qualifications.

pathways from the age of 11 to 18 (inclusive), for the labor market pathways a distinction is drawn between phases of education/training, time not in gainful employment, unemployment, and employment between the ages of 18 and 25 (inclusive). As far as employment is concerned, the labor market segment is taken into consideration by taking information on employment status, pay level, and qualifications required (the latter applying only to Germany) into account. The trajectories were calculated on a monthly basis. The method of sequence analysis³ is used to examine the trajectories. This method, used for example for analyzing DNA, makes it possible to determine the similarity of individual trajectories. The resulting matrix, indicating the distance between the individual trajectories, is subsequently subject to a hierarchical cluster analysis on the basis of Ward's algorithm. Similar patterns are grouped using this process, and thus typical trajectories identified.

- a move associated with a change of school or change of address from the original social milieu to a more mixed milieu, and
- the prospect of a "second chance" through the relevant institutional schemes for acquiring qualifications or entering the labor market at a later stage.

What these three factors have in common is that they can lead to change in difficult and crucial phases in the lives of young people and prevent "negative" drifting.

Support from Third Parties Increases Motivation

Migration researchers have discovered that individual commitment and support provided by the family is often not enough for success at school and professional success. It is also important for people outside their family to intervene in the life course of young people with a migration background. Our study confirms this result: many of the young adults we interviewed who have a higher qualification mention the support provided by a mentor when they were at school, or later, when speaking about their professional orientation. For example, this is what a 30-year-old man of Algerian origin from La Goutte d'Or (Paris) says:

"I took my *baccalauréat* later by going to night school and at the same time I carried on doing a lot of sport [...] and also suffered an injury. And then I met an extraordinary man, an incredible osteopath. Someone with a big heart, who said to me that I had tremendous abilities and he thought I could make a good osteopath. As I had passed my *baccalauréat*, I

³ On the method used, see Lesnard, L., "Schedules as sequences," Electronic International Journal of Time Use Research 1 (1) (2004): 67–91; Brüderl, J. and S. Scherer, "Methoden zur Analyse von Sequenzdaten," Kölner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft 44 (2004): 330–347; Aisenbrey S. and A. Fasang, "New life for old ideas: The "Second Wave" of Sequence Analysis Bringing the "Course" Back into the Life Course," Sociological Methods and Research, 38 (3) (2010): 420–462.

¹² See Portes, A. and Fernández-Kelly, P., "No Margin for Error" (2008) and Raiser, U. Erfolgreiche Migranten im deutschen Bildungssystem (2007).

started training to be an osteopath. It takes a very long time, five years. [...] I'm sticking at it and battling on, so I'll have a better future!"

On the other hand, young people who are stuck in a problematic career frequently complain that they never had a teacher who paid them any attention.

A mentor gives young people personal backing and makes them more self-confident and motivated. For instance, a young woman of Palestinian origin (21 years old) from Gropiusstadt (Berlin) is quoted here:

"So, I have to say, to begin with, we're new here—so I was really on my own, isolated. But because of my teacher, who noticed, okay, so my teacher was really [said with emphasis] lovely, you know. I love her [laughs]. And she noticed I had problems and then she sent me on this course, where I also made some friends [...] Then when I broke my arm and my leg, too, I saw her. And I went ice skating with her, too [laughs] and I saw her there. [...] She really helped me loads. Gave me a lot of personal support. She also went to the hospital with me, visited me, gave me books to read and stuff. So I felt like I was getting a lot of support. You know, because she was the only one who noticed, 'Okay, this girl needs help'. But mainly she was my class teacher."

This young woman of Turkish origin (aged 20) from Nord-Neukölln (Berlin) reports on a similar experience with a teacher:

"So, as I said, just before I left school [...], at that time, I wasn't exactly the type that teachers would like (laughs). But when I was in elementary school, there was this one teacher I had. I'm still in touch with her. I still see her. And I still use things she taught me. Still some words... so, when I use it, I think: "Ah, I got that from her!" She's just great. [...] I often argued with her. Well, not really argued but we had differences of opinion. But now I know she's worth her weight in gold. I know how much she's taught me. And that maybe I wouldn't be the same person if it wasn't for her. She taught me a lot and, um... She was a teacher and we talked a lot about my future. And she just said 'You could do this, you could do that'. I think I've got it from her this, this interest in cultures. I've got it from her, I think, because she traveled a lot. And just—she's a very important person for me. A very important teacher."

What is particularly interesting here is that such supportive people frequently come from another social and

geographical environment and open doors to another world for young people.

The Experience of Other Social Milieus in Districts and Schools Has a Positive Impact

The neighborhoods in which the interviews with the young adults were conducted are characterized by an above-average share of migrants and features indicative of problems such as higher unemployment and poverty.¹³ Although the socio-spatial segregation in France is more pronounced than in Germany, leaving their neighborhood is a striking experience for many of the young adults in both countries. In many cases, this just means short trips to other districts, but what is more formative is the move to schools with a higher social and cultural mix, which are also normally in the relevant districts. This change of school may be associated with a change of address or a transition to another form of school at secondary level, in France often when students decide to take different subjects. Here, too, the influence of third parties is frequently observed. This is what a young man of Lebanese origin (20 years old) from Gropiusstadt (Berlin) says:

"[My fiancée] helped me write my applications. She always motivated me. She said to me, 'If you go to school in Neukölln again, where there are really only foreigners, you won't make anything of yourself.' She was right as well because I wanted to go to one really, too. What I wanted myself, was to go to a school where I didn't know anybody, so I could do my own thing. I don't go to school to make friends. I go to school to get a qualification. Yes. And, well, then she took me there and that was very good—very good for me. Because I'm easily distracted from school."

Surprisingly, many of the young adults interviewed report a very restricted geographic mobility over a long period of time—which sometimes continues—and that it was not until later that they discovered the world outside their neighborhood. Frequently, they did not dare to go anywhere else, it did not occur to them to do so, or they simply did not have the opportunity. This phenomenon of late discovery of a world outside their own environment, which is more pronounced in France, is expressed vividly as a 19-year-old Algerian man from La Goutte d'Or recalls an almost caricature-like trip to Disneyland:

¹³ See Keller, C.: "Strategien und Faktoren der Partizipation von Jugendlichen mit Migrationshintergrund im Blickfeld von Sozialexpert(inn)en," Revue d'Allemagne, 41 (3) (2009): 409-431.

Box 3

Overview of the Qualitative Study

The qualitative sample consists of 175 semi-biographical interviews conducted on young adults in 2009 and 2010. The parents of these young adults, or they themselves, immigrated to France from the Maghreb (North Africa) and Sub-Saharan Africa or to Germany from Turkey and the Middle East when they were still of school age. They were aged between 18 and 35 at the time of the interviews. The objective of the qualitative sample was to conduct contrasting interviews on young adults whose biographies, measured in terms of their educational pathways and professional experience to date and also of their own needs and aspirations, may be classified as biographically successful or unsuccessful.

Moreover, the aim was to interview the same share of young men and women who live in an urban and peripheral district of the cities of Paris and Berlin, respectively: La Goutte d'Or and Clichy-Montfermeil (Paris region) and Nord-Neukölln and Gropiusstadt (Berlin).

In the final analysis, 139 interviews were analyzed which met all the required criteria, while the other

interviews were used for purposes of comparison. The interviews were comprised of an open biographical and a semi-open topic-related part, as well as a concluding questionnaire. The topics covered were migration biography/family, school/profession and networks/district. The interviews were studied using qualitative processes of content, type and life course analysis. The interviews, lasting one and a half hours on average, were transcribed in full, coded and condensed into types along central criteria.¹ Descriptive quantitative processes were also used. The fieldwork on the young adults was preceded by an exploratory study in the four districts in which a qualitative survey was conducted on 62 experts.²

"We weren't used to it. We were just used to fighting or to problems, and so on. That's why everything seemed strange to us when we got to Disney. It was like another world, a parallel world ... We were amazed. People were so well behaved. If someone brushed against you by accident, they said 'Sorry'. I don't know ... It was like another world to us. We were surprised and we didn't want to go home. [...] A friend of mine was there—he's violence incarnate. For the first time in my life, I heard him keep saying, 'Sorry!'."

Young adults see this type of experience as important for their careers because it opens a new window to the world for them and makes them aware of new opportunities. Becoming immersed in a socially alien environment is not always without its problems, however: some of those interviewed report a feeling of alienation and of inferiority, when they get into grammar schools or universities outside their residential area. Nevertheless, in retrospect, most of them describe this widening of geographical and social horizons as very positive for their social development.

Gaining School and Vocational Qualifications at a Later Stage: a "Second Chance" Lacking in France

The comparison of the French and German systems has revealed an important mechanism in the life of young adults. The German transition system has no real equivalent in France, where vocational training is integrated into the school system. Partly because of this, young adults who are seen to be having difficulties along their educational pathway in France are relatively quickly left to their own devices. ¹⁴ They then distance themselves as far as possible from state institutions, particularly school. This distancing is intensified through the memory of France's colonial past. Such an anti-institutio-

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¹ For the qualitative content and life course analysis, we refer in particular to the processes described by Glaser, B., A. Strauss is that right? The Discovery of Grounded Theory. Strategies for Qualitative Research. New York: 1967; Rosenthal, G., Biographisch-narrative Gespräche mit Jugendlichen. Opladen: 2006; Przyborski, A. and M.Wohlrab-Sahr, Qualitative Sozialforschung. Munich: 2010.

² See Groh-Samberg, O., A. Juhasz, C. Keller, and I. Tucci, "Handlungs-strategien junger Erwachsener mit Migrationshintergrund," Soeffner, H.-G. (ed.), Unsichere Zeiten. Wiesbaden: 2010.

¹⁴ In France, young adults under 26 are not entitled to welfare benefits. Within the framework of training schemes provided by the missions locales, they can normally only receive a low level of financial support. At the same time, state measures to combat the high level of unemployment among young people are adopted regularly. The most recent of these measures is the CIVIS program (Contrat d'Insertion dans la Vie Sociale) which offers shorter training courses and is geared towards young adults under 26 years of age whose level of education is no higher than the school-leaving certificate.

nal attitude could not be observed in Germany to anywhere near as great an extent. Although the German transition system does not lead to recognized vocational qualifications,¹⁵ it gives young people who have no or a low level of qualification the opportunity to obtain school qualifications at a later stage, i.e. it gives them a "second chance". Thus, it stabilizes the life course in this sometimes difficult phase of self-discovery, as this example of a 19-year-old man of Lebanese origin from Berlin-Neukölln shows:

"Then I applied here. I applied to three schools, five schools, six schools, all over Berlin. Rejection, rejection. And then here, they didn't want to take me here, either, because of how I behave. Then I said 'I can't get into any school. What are you doing with me? Give me a chance!', and so on. Then they said 'OK. You come study here—study textiles.' I didn't want to do textiles. I don't like textiles. I wanted to do social services because—it's something I can work with better later. But it doesn't really matter now. When I get my MSA [intermediate school-leaving certificate], I think it'll be better." (Some details changed for privacy).

The interview passage also shows the ambivalence of the transition system and the training opportunities it offers:¹⁶ although the preferences of young people are not always met and frequently they also have no clear career prospects, it provides a considerably better alternative to them finding themselves on the street.

Conclusion

In both Germany and France, young people with a migration background more frequently follow precarious career paths than young adults without a migration background. Nevertheless, this report shows that the educational and employment trajectories of this population are diverse. There are advantages and disadvantages to be found in both education systems: it is easier for the descendants of immigrants to access academic education in France, while Germany is more successful at guaranteeing institutional ties for young people who are facing problems. They are given a second chance through the opportunity of obtaining school qualifications or acquiring professional skills at a later date.

Along with the institutional infrastructures, social networks also play a role that is not to be underestimated in setting the biographical course at an early stage of life. Through the help, for example, of a teacher or a mentor, or also through entering another social milieu and neighborhood—for educational purposes or also due to a change of address—young people who grow up in disadvantaged and ethnically segregated districts are motivated, and encouraged to have more confidence in their own abilities. It appears that the school system and teachers can have a great impact on the life course of second-generation migrants—even outside the classroom. What is of importance here is not so much the role of educator, but the attention which a student receives from a "mentor." This attention does not necessarily have to come from a teacher.

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The fact that—although they are pressured into the less prestigious educational pathways—young men and women of Turkish and Arabic origin in Germany do not develop a distance to school institutions, as is the case in France for men and women of North African or Sub-Saharan origin, should be seen as promising. Therefore, in Germany there is an urgent need for action to allow the children of immigrants to enter higher educational trajectories or, after passing through the transition system, to sandwich-course training and work experience, and there is a very good chance that they will also make the most of these opportunities.

¹⁵ The transition system in Germany has sometimes been criticized. See, for example, Baethge, M., H. Solga, and M. Wieck, Berufsbildung im Umbruch. Signale eines überfälligen Aufbruchs (2007). Our analysis focuses on comparing the French and German systems.

¹⁶ In our sample, the vocational training leads to qualifications such as cook, painter/varnisher, security agent or cleaner.



Dr. Ingrid Tucci, Research Associate of the longitudinal Socio-Economic Panel Study (SOEP) at DIW Berlin

FIVE OUESTIONS TO INGRID TUCCI

»At Least in Germany People Get a Second Chance«

- Dr. Tucci, you have compared the careers of secondgeneration migrants in France and Germany. Which nationalities did you take into consideration for your comparison? In Germany, we focused mainly on the children of migrants from Turkey and various Arab countries. In France, we were particularly interested in second-generation migrants from Sub-Saharan countries, in other words, countries south of the Sahel, and descendants of North African migrants.
- 2. In which country do second-generation migrants have better educational opportunities? Overall, we see that an academic path is much more accessible to them in France. There are more migrant children who take their school-leaving exam there. The situation is different in Germany. Here second-generation migrants find it considerably more difficult to get a good education and qualifications. So the education system in France seems to be more conducive to migrants managing to get into higher education. However, there is a typical educational trajectory there that ends with children leaving school early, and second-generation migrants are overrepresented here. Then it is very difficult for them to re-enter the school system. In Germany, on the other hand, it is easier to get a second chance of getting a proper education.
- 3. Where do second-generation migrants have better access to the labor market? There is a tendency for second-generation migrants in both countries to end up in more precarious forms of employment. What we observe in France, unlike in Germany, is a typical course of unemployment. In France, 18 to 25-year-olds in particular are constantly alternating between unemployment and precarious work. In Germany, there is a better tran-

- sition into the labor market. This is probably because of vocational training, which is valued higher in Germany. In France, on the other hand, vocational training is considerably undervalued. Consequently, young people in France who are sent on vocational training courses are often frustrated and even see this path as a form of punishment. In Germany, on the other hand, the dual system of vocational education and training is a good alternative to university studies.
- 4. In what areas could the two countries learn from each other? For example, France could learn from Germany with regard to improving the status of vocational training. This also includes the possibility of getting a second chance for those who don't do so well at school first time round. Conversely, the free early education for children in France could serve as a good model for Germany too. In France, all children go to pre-school at the age of three, which is particularly important for second-generation migrants. In addition, all French children follow the same educational pathway up until the age of 15. In Germany, they follow different trajectories at an earlier age, which may be one reason why the children of migrants in particular don't manage to take their school-leaving exams as often.
- 5. What did you learn from the interviews with young people? On the one hand, we discovered that social networks play an important role, especially if young adults receive help from a teacher, mentor or family friend in the course of their education. This increases their motivation and belief in their own abilities. On the other hand, we observe that it has a very positive effect if young people growing up in deprived areas also have experiences outside their "neighborhood," and get to know another world.

Reform of Income Splitting for Married Couples: Only Individual Taxation Significantly Increases Working Incentives

by Stefan Bach, Johannes Geyer, Peter Haan, and Katharina Wrohlich

The joint taxation of married couples in Germany with full income splitting is still a major hindrance to the participation of married women in the labor market. In their current financial proposals, the SPD (Social Democratic Party) is calling for income splitting for married couples to be replaced by individual taxation with maintenance deductions, in accordance with existing schemes for divorced spouses. Simulations implemented by DIW Berlin show that such a reform would only have limited effects on distribution and labor supply. Pure individual taxation, however, would not only lead to significant additional tax revenue but would also considerably increase the number of married women participating in the labor market. If politicians take the goal of greater integration of married women in the labor market seriously, then the current income splitting for married couples would have to be replaced by individuation taxation.

In the political and economic debate, income splitting for married couples is deemed as an important reason for the relatively low participation of married women in the labor market in Germany. Joint taxation may result in higher marginal tax rates for secondary wage earners depending on the spouse's income. From a social or family policy point of view, there is often criticism that income splitting for married couples does not support households with children but rather just marriages and should therefore be reconsidered. DIW Berlin has already shown in previous studies that the introduction of individual taxation for married couples would lead to greater effects on female labor supply (see box).

Alternatives to Income Splitting for Married Couples

In contrast to Germany, many other countries (the UK, Sweden, The Netherlands, Spain, Portugal and Austria) have abolished joint taxation for married couples in favor of individual taxation. In these countries, there are, at the most, moderate tax deductions for non-earning spouses or tax credits.⁴

¹ See Steiner, V. and K. Wrohlich, "Household Taxation, Income Splitting and Labor Supply Incentives. A Microsimulation Study for Germany," CESifo Economic Studies 50 (3), (2004): 541–568; and Steiner, V. and K. Wrohlich, "Die Wirkung ausgewählter familienpolitischer Instrumente auf das Arbeitsangebot von Eltern. Expertise für den Familienbericht im Auftrag der Bundesregierung," DIW Berlin: Politikberatung Kompakt no. 16. (Berlin: 2006).

² Some years ago, income splitting for families in Germany was discussed as an alternative to income splitting for married couples. See Steiner, V. and K. Wrohlich, "Familiensplitting begünstigt einkommensstarke Familien, geringe Auswirkungen auf das Arbeitsangebot," Wochenbericht des DIW Berlin no. 31 (2006).

³ Steiner and Wrohlich, "Household Taxation"; Dearing, H., H. Hofer, C. Lietz, R. Winter-Ebmer, and K. Wrohlich, "Why are mothers working longer hours in Austria than in Germany? A comparative microsimulation analysis," Fiscal Studies, 28 (4), (2007): 463–495.

⁴ See Dingeldey, I., "Das deutsche System der Ehegattenbesteuerung im europäischen Vergleich," WSI Mitteilungen 3/2002, (2005): 154–160; OECD "Taxing Working Families: A Distributional Analysis," OECD Tax Policy Study No. 12. (Paris: 2005).

Box

The Effect of Income Splitting for Married Couples¹

In Germany, married couples are taxed using the income splitting method. In the case of joint taxation, the entire taxable income of both spouses is halved, the resulting attributable income tax calculated, and then the tax payable is doubled. This regulation ensures that the tax liability of a married couple is irrespective of the distribution of income within the household. This results in an equal tax liability for households with equal incomes. Using a progressive tax rate results in a "splitting advantage" over unmarried couples with the same household income. The reason for this is that using the splitting system, two basic allowances are taken into account for each married couple. This also applies even if one spouse has made no taxable income. Secondly, by fictitiously halving taxable income, the progression of the income tax is reduced. The splitting advantage is greater, the higher the household income and the greater the difference between the individual incomes of the spouses. The maximum splitting advantage under the tax rate in 2005 was around EUR 8,000. This was achieved with a taxable annual income of more than EUR 100,000. Due to the introduction of the wealth tax in 2007, the maximum splitting advantage

1 Steiner and Wrohlich, "Familiensplitting."

for married couples with taxable incomes of over EUR 250,000 continued to rise and now has a maximum of about EUR 15,000 per annum for incomes of over EUR 500,000. The splitting advantage decreases rapidly when the other spouse increasingly contributes to household income and disappears when both spouses have the same income.²

The splitting procedure, in the strict sense, only refers to income tax rates for the joint taxation of married couples. In addition, there are additional benefits to determining the taxable income of spouses jointly rather than individually, particularly for expenses of a provident nature, savings allowances, and lump sums. Furthermore, spouses can offset profits and losses against one another. These benefits also cease to exist in individual taxation.

2 For a detailed explanation of the effects of income splitting for married couples on tax revenue and distribution, see Bach, S., H. Buslei, D. Svindland, H. Baumgartner, J. Platt, and D. Teichmann, "Untersuchungen zu den Wirkungen der gegenwartigen Ehegattenbesteuerung auf Grundlage von fortgeschriebenen Einzeldaten der Einkommensteuerstatistik," Projektbericht 2 zur Forschungskooperation "Mikrosimulation" mit dem Bundesministerium der Finanzen: (DIW Berlin, 2003). 70.; Bach, S. and H. Buslei, "Fiskalische Wirkungen einer Reform der Ehegattenbesteuerung," Wochenbericht des DIW Berlin no. 22. (2003).

However, the abolition of joint taxation for married couples using income splitting and the introduction of individual taxation are viewed critically in Germany from a constitutional standpoint. An adjudication by the Federal Constitutional Court concluded that single-earner, married couples must be granted at least twice the basic allowance in order keep the joint subsistence minimum of married couples tax-free. Without further regulations, married couples would be worse off than divorced spouses in taxation terms. Under current law, divorced spouses who pay their former partners maintenance may deduct these maintenance payments from their taxable income up to a maximum of EUR 13,806 per annum.

The divorced spouse receiving the maintenance must then be taxed on these maintenance payments as income.

This form of taxation for divorced spouses may also be referred to as "limited de facto splitting." The introduction of such limited de facto splitting instead of income splitting for married couples has been proposed in the past by various political players. During the SPD/Green coalition negotiations in 2002, for example, it was discussed whether spouses ought to be able to transfer a maximum of EUR 20,000 to each other so that income differentials of EUR 40,000 could still be offset.

⁵ See overview outlines in Vollmer, F. Das Ehegattensplitting: Eine verfassungsrechtliche Untersuchung der Einkommensbesteuerung von Eheleuten. Baden-Baden. 1998; Spangenberg, U. "Neuorientierung der Ehebesteuerung: Ehegattensplitting und Lohnsteuerverfahren," (Hans-Böckler-Stiftung, Arbeitspapier, 2005): 106.

⁶ See also studies by DIW Berlin showing that the labor supply effects of such a reform would be minimal compared to individual taxation, Steiner and Wrohlich (2004).

Current Proposal by the SPD

In its new financial policy plan, the SPD is currently proposing to introduce "individual taxation with maintenance deductions" for future marriages. This alternative corresponds to the limited de facto splitting described above: the higher-income spouse can, as is currently possible for divorced spouses, transfer a maximum income of EUR 13,806 per annum to the lower-income spouse. This means that a difference in income of up to EUR 27,612 can be offset. All married couples where the difference in income between the spouses is less than this amount are therefore not affected by this reform. For all other couples, the limit of transmissible income for the splitting advantage would be capped at a maximum of EUR 5,100 per annum.

Figures 1 and 2 show the variation of the splitting advantage depending on the taxable income of the household and the distribution of income between spouses. Figure 1 illustrates the tax savings achievable with current income splitting for married couples compared to individual taxation. Couples in which one partner earns 100 percent of the total taxable income benefit most from income splitting. For such households, the splitting advantage increases until a top tax rate of 42 percent is achieved. After this point, the advantage remains constant up to a taxable income of EUR 250,000, after which it continues to increase due to the wealth tax (top tax rate of 45 percent) until it reaches the maximum value of over EUR 15,000 per annum. Figure 2 shows the tax savings possible with the SPD's proposal compared to individual taxation. The individual taxation proposal with deductions for maintenance still affords significant splitting advantages.

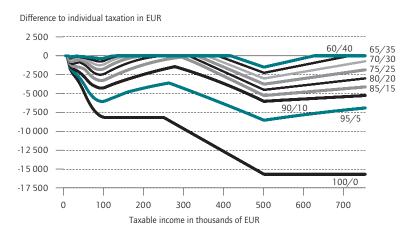
Empirical Analysis of Individual Taxation with and without Maintenance Deductions

DIW Berlin has empirically examined the effect of individual taxation with maintenance deductions proposed by the SPD and compared its effects on distribution and labor supply with those expected from the introduction of pure individual taxation. In contrast to the SPD's proposal, however, we have assumed that this reform would apply to all marriages and not just for future marriages. In the short term, limiting the proposal to future marriages only would lead to virtually no change in the status quo.

For the empirical analysis, we used a microsimulation model with behavioral adaptation. In addition to a detailed depiction of the German tax and transfer system, the Tax-Benefit Microsimulation Model, STSM, includes

Figure 1

Splitting Advantage with Income Tax Rate 2008



Source: Calculations by DIW Berlin with the Tax-Benefit Microsimulation Model (STSM).

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The splitting advantage is greatest for single-wage-earner married couples.

Figure 2

Splitting Advantage with SPD's Proposal

Difference to individual taxation in EUR

75/2 5 70/3 0 80/20 60/40 65/35 -1 000 -2 000 -3 000 -4 000 -5 000 100/0 -6 000 0 200 100 300 400 500 600 700 Taxable income in thousands of EUR

Source: Calculations by DIW Berlin with the tax-benefit microsimulation model (STSM).

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There are still splitting advantages with the SPD's proposal.

a micro-econometrically estimated labor supply model of private households in Germany.⁷ The database for this is the German Socio-Economic Panel Study (SOEP).⁸ We based our analysis on SOEP data from 2009 (v26).

The STSM can be used to calculate net income per household under the current legal framework of income splitting for married couples (status quo) and for the reform alternatives i) individual taxation with maintenance deductions and ii) individual taxation from SOEP data. Consequently, we can quantify the income effects of the reforms. For the analysis, we initially assumed that the behavior of households does not change with the introduction of the reform. In addition to income changes ("first-round effects"), the STSM and econometric behavior estimation can also be used to simulate and quantify the labor supply effects on married women and men induced by the respective reform ("second round" effects). The first round effects are calculated for

all married households. We only estimate second round effects for married couples where both partners are potentially dependently employed, that is, not in training, self-employment or retirement.

In the analyses, we disregard additional adjustment reactions by households, in particular, different design options in the distribution of income between spouses. These play an important role for recipients of profit and asset income. However, such designs usually only have limited weighting because spouses have to give up ownership of the relevant assets, which may also incur gift tax, and tax offices may prohibit fraudulent contracts. Such distributions of income can actually reduce the additional revenue from a tax reform significantly. But for the analysis considered here, they are not of significant importance because they are only relevant in few households.

7 Steiner V., K. Wrohlich, P. Haan, and J. Geyer, (2008): "Documentation of the Tax-Benefit Microsimulation Model STSM: Version 2008," DIW Data Documentation No. 31. The model has already been used by DIW in other studies to analyze the effects of potential tax reforms on labor market behavior.

Table 1

Effects of Individual Taxation on Net Household Income

Тах	Taxable income ¹ in EUR			Single wage earners	Double wage earners	Western Germany	Eastern Germany
			Change compared to income splitting for married couples possible month in EUR				ouples per
	up to below	25 000	34	70	48	39	18
25 000	-	30000	155	199	56	163	108
30 000	-	40000	151	212	68	161	98
40 000	-	50000	181	277	92	204	68
50 000	-	75 000	166	349	76	178	91
75 000	-	100 000	260	432	139	275	111
100 000	and	more	208	315	105	214	106
		Total	119	232	86	134	50

¹ Calculated on an annual basis.

Source: Calculations by DIW Berlin with the Tax-Benefit Microsimulation Model (STSM).

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Individual taxation leads to high taxes, especially in single-earner marriages with high incomes.

Significant Income Effects from Individual Taxation

Table I shows the changes in net household income in EUR per month resulting from the introduction of individual taxation compared to the current situation with income splitting for married couples. Table 2 outlines the corresponding effects on net household income when individual taxation with maintenance deductions is applied. By definition, tax revenue from both reforms is higher than with income splitting for married couples. Therefore, net household income is also lower. In the following, we have assumed that additional revenue is not to be used for reductions in other taxes or increases in state benefits.

On average, net household income decreases by EUR 119 per month with individual taxation (Table 1). Married couples where only one spouse earns an income lose EUR 232 per month. They are therefore significantly more affected than double-earning couples who have to suffer an average loss of only EUR 86. Married couples in Western Germany benefit significantly more from income splitting for married couples than those in Eastern Germany: On average, married couples in Western Germany lose EUR 134 per month through individual taxation, while in the East it is only EUR 50. This is due to the fact that there are more double-earning couples in the East; also, average incomes in the East are still lower than in the West. Furthermore, Table 1 shows that, in case of a transition to individual taxation, losses in net household income increase with higher incomes: mar-

⁸ The SOEP is an annual representative survey of private households in Germany conducted by the DIW Berlin in cooperation with the fieldwork organization Infratest Sozialforschung. Wagner, G., J. Göbel, P. Krause, R. Pischner, and I. Sieber, "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland—Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Nutzer)," AStA Wirtschafts- und Sozialstatistisches Archiv 2 (4), (2008): 301–328.

⁹ Bach and Buslei, "Fiskalische Wirkungen."

ried couples with an income of less than EUR 25,000 per annum would only lose EUR 34 per month, while married couples with an average income of over EUR 100.000 would lose EUR 208.

The income effects of the introduction of individual taxation with maintenance deductions are significantly less (Table 2). On average, net household income decreases by only about EUR 25 per month. The differences between individual household groups are, however, similar to the introduction of individual taxation. Single earners (EUR 59 per month) and households in Western Germany (EUR 29 per month) are significantly more affected than double earners (EUR 14) and households in Eastern Germany (EUR 8).

The Labor Supply Effects of Individual Taxation Are Significantly Greater

Before we show the results of the empirical analysis of labor supply effects from both reforms, we will first outline the changes in working incentives for women, using graphs. Figure 3 shows the net household income for a family with two children, depending on the hours worked by the wife with a medium and high hourly wage.

The upper part of Figure 3 shows the net income of a married couple with a median wage: the man earns EUR 16.00 per hour, the woman EUR 12.30. We assume that the man is in full-time employment. For this couple, there is no change with a transition from the status quo to individual taxation with maintenance deductions. The difference in the taxable income of both spouses is actually less than EUR 27,600, in the event that the woman is not in employment, so this household is not subject to any additional taxation burden and, therefore, there is no change in the working incentive. A transition to individual taxation would, however, have significant implications for this household. On the one hand, in this scenario it loses income of EUR 250 per month if the woman only works for a few hours. On the other hand, the "budget line" becomes significantly steeper: for every hour the wife works more, the greater the income the household gets compared to the current system of income splitting for married couples. This increases the working incentive. Moreover, the kink in the budget line, which is caused by the EUR 400 minijob limit, is reduced. Income below the mini-job limit is tax-free and all income above this threshold is taxable. Therefore, not only does social security apply from this limit, but also income tax. The resulting kink in the budget line implies that a household just below the mini-job threshold has more income than a household that lies just above the threshold. In the case of indiviTable 2

Effects of Individual Taxation with Maintenance Deductions on Net Household Income

Тах	Taxable income ¹ in EUR			Single wage earners	Double wage earners	Western Germany	Eastern Germany
			Change compared to income splitting for married coup month in EUR				ouples per
	up to below	25 000	2	9	6	2	1
25 000	-	30000	21	32	8	23	13
30 000	-	40 000	22	36	8	23	15
40 000	-	50000	29	54	10	33	11
50 000	-	75 000	39	102	9	42	18
75 000	-	100 000	95	182	37	100	36
100 000	and	more	92	159	35	95	40
		Total	25	59	14	29	8

1 Calculated on an annual basis.

Source: Calculations by DIW Berlin with the Tax-Benefit Microsimulation Model (STSM).

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Individual taxation with maintenance deductions only leads to minimal effects on income.

dual taxation, the kink largely disappears so that parttime employment above the mini-job threshold becomes more attractive.

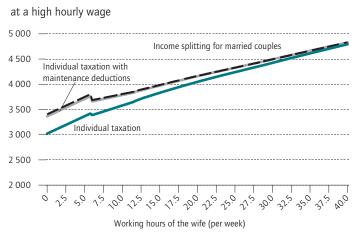
The lower part of Figure 3 shows the same scenario for a married couple with high wages. We have assumed that the man has a gross hourly wage of EUR 26.10 which corresponds to the 90-percent percentile of the distribution of hourly wages for men. For the woman, we assume an hourly rate of EUR 15.20, which corresponds to the 75-percent percentile of the distribution of hourly wages for women. A transition to individual taxation with maintenance deductions has little impact on the budget line for such wages. The income in this case is slightly lower than income in the status quo. A transition to pure individual taxation would result in a far greater impact on working incentives. As in the case of the married couple with a medium income, the kink at the mini-job threshold is also reduced and the steepness of the budget line right of this point increases.

The figure demonstrates that labor supply effects can be expected from both reform alternatives: since individual taxation with maintenance deductions has very little impact on the working incentive, no appreciable labor effects would be achieved by its introduction. In contrast, a transition to pure individual taxation would massively alter the working incentive in such a way that this reform would significantly increase labor supply.

Figure 3

Net Household Income in EUR per Month Related to the Number of Working Hours of the Wife





Note: The figure above shows the net household income for a married couple with median wages of EUR16.00 per hour for the man and EUR 12.30 per hour for the woman. In the lower figure, wages of EUR 26.10 per hour for men and EUR 15.20 per hour for the woman are assumed.

Source: Calculations by DIW Berlin with the Tax-Benefit Microsimulation Model (STSM).

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The SPD's proposal only leads to a minor impact on income even if wages are high.

Table 3 outlines the estimated labor supply effects on individual taxation and on individual taxation with maintenance deductions. They are significantly higher with individual taxation than for individual taxation with maintenance deductions. The latter increases the participation rate of married women in our population of around 73 percent by about 0.7 percentage points and increases the average hours of work carried out by these women at around 20 hours per week by about 2.4 percent. For men, we find hardly any labor supply effects in this case.

According to our calculations, there would be significant consequences for both men and women if they were taxed individually. The participation rate of women would increase by about 2.4 percentage points, while for men this figure would decrease by about 0.3 percentage points. The average working hours of women would increase by about 7.4 percent and decrease by 1.5 percent for men. The large difference between men and women can be explained by the lower labor supply elasticities among men. In general, this means that labor supply for men would change significantly less than for women if there was a change in income.

An increase in working hours and participation rates among women is more prevalent in Western Germany. However, the female labor supply in Eastern Germany only changes minimally. Again, the reason for this is that there are significantly more double-earner couples in Eastern Germany and that income inequalities between spouses in Eastern Germany are lower than in Western Germany.

Conclusion

The empirical analysis of the labor supply effects of the SPD's proposal to introduce individual taxation with maintenance deductions shows that anticipated changes in the participation of married women in employment are low. This is because, due to maintenance deductions, differences in income up to EUR 27,612 can continue to be offset between the spouses.

In contrast, a transition to individual taxation would have significantly greater effects on the labor supply of married women. We find an appreciable increase in both the participation rate and the average hours worked. This shows that the current taxation of spouses has strongly negative consequences on the working incentive for married women.

According to our calculations, the introduction of individual taxation for income tax would generate annual tax revenues (including the solidarity surcharge) of about EUR 27 billion, which is still more than ten percent of income tax revenue and about 1.1 percent of gross domestic product. The additional revenues are almost five times as high as those of individual taxation with maintenance deductions (approximately EUR 5.5 billion per

¹⁰ An earlier study by DIW Berlin calculated higher labor supply effects for the transition from income splitting for married couples to individual taxation (Steiner and Wrohlich, "Household Taxation"). This study was based on SOEP data from 2002. At that time, the participation rates and average hours worked by women were significantly lower. This explains the lower effects in the current study.

annum). This additional revenue could be used for fiscal consolidation, as well as to reduce tax progression in the lower income brackets, to reduce other taxes and duties, or for increased state benefits.

If the economic goal is to better integrate married women into the labor market and, therefore, contribute to the long-term demographic development of the potential labor force, then conflicting incentives in the tax and benefits systems should be systematically removed. The plan proposed by the SPD for reforming joint taxation for married couples would only make a very minor contribution to this. In particular, this is true if the reform—in contrast to our calculations—only applies to future marriages. Constitutional objections to individual taxation should not be given too much weight. By international comparison, there are many countries with completely or largely individual income taxation which give no or only minimal benefits to spouses with no income of their own.

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Table 3

The Labor Supply Effects of Alternative Reform Proposals

	V	Vomen	Men			
	Individual taxation	Individual taxation with maintenance deductions	Individual taxation	Individual taxation with maintenance deductions		
	Change in the participation rate (in percentage points)					
All couples	2.37	0.73	-0.27	-0.02		
West	2.83	0.87	-0.33	-0.03		
East	0.76	0.22	-0.06	0.00		
		Change in average w	orking hours (in percen	t)		
All couples	7.38	2.44	-1.50	-0.22		
West	8.65	2.89	-1.82	-0.29		
East	2.89	0.86	-0.38	0.00		

Source: Calculations by DIW Berlin with the Tax-Benefit Microsimulation Model (STSM).

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The effects of individual taxation on labor supply are especially significant among women in Western Germany.

Child Care Choices in Western Germany Also Correlated with Mother's Personality

by By Liv Bjerre, Frauke Peter*, and C. Katharina Spieß

The expansion of formal child care, particularly for children under the age of three, has resulted in more and more children from this age group attending day care facilities. This formal child care setting is frequently combined with care provided by grandparents or other individuals. The combination and number of child care settings made use of is influenced by a variety of socio-economic factors and the range of options available. Maternal personality can also explain differences in child care choices, if only to a relatively limited extent and predominantly in families residing in Western Germany. Analyses based on the German Socio-Economic Panel Study (SOEP) show that mothers in Western Germany who are very open to new experiences are more likely to combine the use of formal with informal child care. Mothers, who classify themselves as conscientious, in line with personality research, are less likely to use this setting as the sole additional type of child care alongside parental care. The analyses emphasize just how different parental preferences are. A policy that is focused on freedom of choice and on creating the conditions for this by expanding the child care infrastructure should take these differences into account.

Reasons for using a day care facility are closely connected to parental employment behavior, particularly that of mothers. This is supported by various empirical studies.² As the child gets older, families with only one employed parent also use day care. Here, educational considerations are at the fore: children attend a child day care facility for social or other reasons which may benefit the development of the child.³

Attendance at a day care facility is not, however, the only child care option available to parents. Alongside other formal types of child care, such as family day care, parents also make use of informal child care. Informal care can be provided by relatives, predominantly grand-parents, or by other paid or unpaid caregivers (such as a privately paid nanny, friends or neighbors). The role of grandparents is of crucial importance here: in 2008, 55 percent of all two to three-year-olds and 48 percent of all five to six-year-olds in Western Germany were looked after by their grandparents for at least one hour per week.

In recent years, the use of child day care facilities in Germany has dramatically increased, particularly for younger children. In 2010, 15 percent of all children under the age of three in Western Germany attended a day care facility. For children in their third year, the percentage was 35. Since 1996, older children who do not yet go to school have been legally entitled to at least a half-day kindergarten place. However, not all three and four-year-old children attend a day care facility. Only in the last year before school enrolment almost all children attend such a facility.

^{*} Frauke Peter would like to thank the Federal Ministry of Education and Research (BMBF) for financially supporting her research with a doctoral grant for young researchers as part of its Framework Programme for the Promotion of Empirical Education Research.

¹ See Federal Statistical Office (Statistisches Bundesamt): Statistiken der Kinder und Jugendhilfe. Kinder und t\u00e4tige Personen in Tageseinrichtungen und Kindertagespflege 2006-2010; Berechnungen der Dortmunder Arbeitsstelle Kinder und Jugendhilfestatistik.

² For a summary, see: Spieß, C. K., "Vereinbarkeit von Familie und Beruf—wie wirksam sind deutsche "Care Policies"?," Perspektiven der Wirtschaftspolitik. Special Issue 2011, (12): 4-27.

³ These considerations are, of course, also significant in cases where both parents are employed.

Table 1

Type of Child Care, Number of Child Care Settings, and Maternal Employment Status

Age of child	Employment status	Day care facility (row percentage)	Relatives	Child care by others (e.g., friends, neighbors) (row percentage)	Parental child care only (row percentage)	Number of non-parental child care settings(mean values)
2-3 years	Full-time	78.5	76.3		•••	1.6
	Part-time	75.1	74.8	10.0	1.8	1.6
	In marginal employment	54.4	75.9	[13.4]	•••	1.4
	Not employed	36.2	55.1	7.7	25.6	1.0
5-6 years	Full-time	92.8	73.9		***	1.7
	Part-time	93.6	54.3	[12.4]	•••	1.6
	In marginal employment	100.0	[74.4]			1.8
	Not employed	92.3	55.0			1.5

Note: Multiple responses for different types of child care are possible. If number of cases N<10 percentages are not shown, if number of cases 10<=N<29 percentages are shown in square brackets.

Sources: SOEP v26 (2005-2009), weighted; calculations by DIW Berlin.

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Employed mothers use a greater variety of child care settings.

In Eastern Germany, these figures were 60 and 62 percent, respectively. 4

Employed and Not Employed Mothers Use Different Child Care Arrangements

Analyses based on the German Socio-Economic Panel Study (SOEP) clearly demonstrate the variety of types of child care made use of by different groups of mothers (Table 1). We find that almost 80 percent of children in the two to three-year age group with mothers in full-time employment attend a child day care facility. Furthermore, 76 percent of two to three-year-olds with mothers in full-time employment are also cared for by relatives, primarily by grandparents, even if only for a few hours. Of the two to three-year-olds whose mothers are not employed, around 36 percent attend a day care facility. This figure is far higher among older children and differences between the children of not employed and employed mothers are no longer significant.

However, parents frequently combine formal and informal child care options if, for example, the opening hours of a day care facility are not compatible with their working hours. This is demonstrated by the finding that, in 2008, 29 percent of all mothers in Western Germany whose youngest child was under three years of age were

4 Own analyses based on SOEP v25 (2008).

in employment,⁵ but only 12 percent of children under three are in formal care settings.⁶ SOEP-based analyses provide further evidence of this: with an average of 1.6 child care settings, the younger children of full-time and part-time mothers are more likely to use two additional combinations of child care alongside parental care. In contrast, the children of not employed mothers or mothers in marginal employment only use one additional type of child care. Among children from the older age group (five to six years), this difference is less obvious. In this group, on average, two additional types of care are always used (Table 1). One child is, for example, allocated two forms of care if he/she attends a day care facility and is also cared for by grandparents.

The extent to which the choice of specific types of child care is actually driven by parents' preferences or can be explained by the limited availability of high-quality child day care with flexible opening hours cannot be differentiated in the majority of studies. Nevertheless, research conducted to date has identified some important factors for the use of formal and, to a lesser extent,

⁵ Federal Statistical Office: Erwerbstätigenquoten der 15- bis unter 65 Jährigen mit Kindern unter 18 Jahren: Früheres Bundesgebiet/Neue Länder, Jahre, Alter des jüngsten Kindes, Geschlecht, Ergebnisse des Mikrozensus, Wiesbaden. (2010)

⁶ In the city states, 32 percent of all children under three use a child day care facility. See: Federal Statistical Office: Statistiken der Kinder- und Jugendhilfe, Kinder und tätige Personen in Tageseinrichtungen und Kindertagespflege 2006-2010; Berechnungen der Dortmunder Arbeitsstelle Kinder- und Jugendhilfestatistik.

Box

Personality Traits-the Big-Five

Extraversion refers to personality dispositions such as sociableness, activeness, drive, assertiveness, and enthusiasm.

Agreeableness includes the different facets of flexibility, openness, humility, cooperation, trust, and altruism.

Conscientiousness means that an individual is achievement-oriented, level-headed, thorough, well-organized, responsible, and self-disciplined.

Neuroticism refers to the different facets of anxiety, sadness, insecurity, irritability, impulsiveness, and vulnerability.

The *openness* dimension encompasses imagination, fantasy, an openness to new ideas, sensitivity to beauty, feelings, and openness to change as well as a flexible system of norms and values.

Source: Lang, F. R. and O. Lüdtke: "Der Big Five-Ansatz der Persönlichkeitsforschung: Instrumente und Vorgehen," in Persönlichkeit: eine vergessene Größe der empirischen Sozialforschung, ed. S. Schumann (Wiesbaden: VS Verlag, 2005), 32.

also informal child care. Alongside the mother's occupation and her volume of work, household income, parental education, and migration background are all important factors.⁷ These socio-economic variables go a long way towards explaining the heterogeneity among types of child care used, but do not account for everything. There must, therefore, be other factors, that have not yet been captured in these models. Here, attitudes towards education or parental educational aspirations might be important. International research in this field indicates, however, that psychological factors are significant as well.

Personality Traits are Correlated with Type and Number of Child Care Types

Research on education and family economics in Germany to date has rarely questioned the extent to which psychological factors, which could be perceived as elements of parental preference structure, are correlated with the choice of child care types used. This is even more stri-

king since research in the field of early childhood conducted in the US, which has gained in prominence due to the work of the Nobel laureate in Economics, James Heckman, has provided substantial evidence regarding the significance of parental personality in the development of children and their skills.⁸

Against this research backdrop, we consider the extent to which the choice of specific types of day care and also the number of care settings selected are influenced by the mother's personality. We restrict our analyses to maternal personality traits as mothers continue to be the main caregiver. We also draw on some international studies from psychology which have already analyzed the correlation between psychological variables and the choice of child care.9 These studies capture both mothers' personal attitudes and assessments and their psychological well-being. An early study by Applebaum (1997)10 analyzed, for example, to what extent the mother's personality, alongside other psychological factors, may explain the combinations of child care settings used. This US study found a significant positive correlation between mothers' extraversion and agreeableness and the selection of certain types of child care. Here, the connection with extraversion was the strongest: the more a mother was classified as extroverted, the greater the probability that her child would attend non-parental care for at least ten hours per week.

Our analyses are based on a German representative study of private households and persons, the German Socio-Economic Panel (SOEP). We analyze the SOEP waves 2005 to 2009. In 2005, the SOEP survey, conducted by the DIW Berlin in cooperation with the fieldwork organization TNS Infratest Sozialforschung, collected information on personality for the first time. These were collected according to the so-called "Big Five" concept. Thereafter, the following five personality dimensions

⁷ For a summary, see, for example: Spiess, C. K. "Early Childhood Education and Care in Germany: The Status Quo and Reform Proposals," Zeitschrift für Betriebswirtschaftslehre 67 (2008): 1-20.

⁸ See Heckman, "The economics, technology, and neuroscience of human capability formation," Proceedings of the National Academy of Sciences of the United States of America,104(33); Aug 14, 2007, and also Heckman "Integrating Personality Psychology into Economics," IZA Discussion Paper 5950, (Bonn: 2011).

⁹ See, for example, Barnes, J., "Infant care in England: Mothers' aspirations, experiences, satisfaction, and caregiver relationships." Early Child Development and Care 176 (5) (2006): 553-573; Network, N. E. C. C. R., "Child-care effect sizes for the NICHD Study of Early Child Care and Youth Development" American Psychology 61(2) (2006): 99-116; or Sylva, K., et al.. "Family and child factors related to the use of non-maternal infant care: An English study." Early Childhood Research Quarterly 22(1) (2007): 118-136

¹⁰ See: Appelbaum, M. et al. "Familial factors associated with the characteristics of nonmaternal care for infants," Journal of Marriage and the Family 59 (2) (1997): 389-408.

¹¹ On this, see: Dehne, M. and J. Schupp, "Persönlichkeitsmerkmale im Sozio-oekonomischen Panel (SOEP): Konzept, Umsetzung und empirische Eigenschaften. DIW Research Notes no. 26, Berlin (2007). http://www.diw.de/documents/publikationen/73/diw_01.c.76533.de/rn26.pdf

can be measured: extraversion, agreeableness, conscientiousness, neuroticism and openness (see box). Using these dimensions, we are able to describe the personality of mothers of young children.

We distinguish between different age groups of children as the factors correlated with the use of specific forms of child care are different for younger than for older children. This enables us to analyze, on the one hand, an age group (two to three years) where 52 percent attend formal care and, on the other hand, a group (five to six years) where the majority (94 percent) attend formal care. Information on combinations of child care settings is drawn from the SOEP mother-child questions. Since 2003, these specific questionnaires have captured child care in greater detail than in the household questionnaire. ¹²

Extroverted Mothers More Likely to Use Child Day Care Facilities

An initial bivariate analysis demonstrates the correlation between the five personality dimensions of the mother and the number of specific child care types (Table 2).

We then analyze all types of child care individually, irrespective of whether or not they are combined. We find evidence that extroverted mothers (characterized by greater enthusiasm and drive) of children in the two to three-year age group are more likely to use a child day care facility than those who are less extroverted. The use of family day care, in contrast, is correlated with the mother's neuroticism. Presumably, insecure and nervous women are more likely to choose family day care because this type of child care is closer to family care. Mothers characterized by greater openness are inherently more likely to use relatives for child care than the correspon-

Table 2

Correlation Between Type of Child Care, Number of Child Care Settings and Maternal Personality Marginal effects

			Logit model					
Age of child	Maternal personality	Daycare facility	Family Day Care	Relatives	Care by others (e.g., friends, neighbors)	Parental care only	Number of child care settings	
2-3 year	's Openness	0.018	0.004	0.022**	0.013	-0.016	0.053**	
	Extraversion	0.035**	0.000	0.006	0.019	-0.017	0.059**	
	Conscientiousness	0.006	-0.009	-0.002	0.021	-0.005	0.026	
	Neuroticism	0.015	0.016**	-0.014	0.022	-0.004	0.022	
	Agreeableness	-0.022	-0.003	-0.005	0.002	0.010	-0.024	
	N pseudo R²/adj.R²	838 0.006	838 0.022	838 0.012	838 0.005	838 0.008	838 0.015	
5-6 years¹	Openness	-0.021**	-0.000	0.037**	-0.035		-0.023	
	Extraversion	0.004	-0.001	0.029*	0.025		0.059*	
	Conscientiousness	-0.016*	-0.001	-0.029*	0.062**		0.011	
	Neuroticism	-0.010	0.001	-0.039***	-0.005		-0.065*	
	Agreeableness	-0.006	0.000	-0.012	-0.027		-0.046	
	N	334	334	334	334		334	
	pseudo R ² /adj.R ²	0.087	0.253	0.072	0.023		0.026	

¹ No results in Column 5, as very few children in this age group are cared for exclusively by their parents. The different forms of child care are not mutually exclusive.

Sources: SOEP v26 (2005-2009), weighted; calculations by DIW Berlin.

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Mothers who are open and more extroverted use a wider variety of child care settings.

¹² On this, see: Schupp, J., C. K. Spiess, and G. G. Wagner, "Die verhaltenswissenschaftliche Weiterentwicklung des Erhebungsprogramms des SOEP," Vierteljahrshefte zur Wirtschaftsforschung 77, 3: (2008): 63-76.

¹³ This means that the types of care are not mutually exclusive.

^{*} p < 0.10, ** p < 0.05, *** p < 0.01

ding reference group of mothers, either in combination with a child day care facility or on its own.

The situation regarding mothers of five to six-year-olds looks somewhat different: the initial similarity is that the children of mothers who are characterized as being more open are, on average, more likely to make use of child care provided by relatives but less likely to use child day care facilities. The more neurotic the mother, i.e., the more nervous and insecure she is, the less likely she will use relatives as additional carers for her child—on the whole, almost all children in this age group attend a child day care facility. The more conscientious the mother, the more likely it is that the pre-school child will be cared for by friends or neighbors.

The number of child care settings used can also be correlated with the mother's personality traits: the more open and extroverted the mother of a two to three-year-old, the greater the number of types of child care she is likely to use. With regard to extraversion—this also applies to children in the five to six-year age group. The more neurotic the mother, the fewer types of child care she is likely to use.

A Mother's Conscientiousness Correlates with Use of Day Care Facilities, But Only in Western Germany

In a multivariate analysis we consider other factors alongside personality, such as the mother's occupation, child's age, etc., which are associated with the use of different types of child care. We focus here on the use of a child day care facility or family day care as formal care. In our first model, we do not distinguish between whether or not formal care is combined with informal forms of care. In our second model, however, we draw a distinction between whether the formal child care is the only type, alongside parental care, or whether it is combined with informal child care.

First, the analyses confirm the findings of previous studies: use of a child day care facility and family day care depends particularly on the child's age, the mother's occupation, her education, household income, the number of children, family migration background, and region. This particularly applies to children in the two to three-year age group, whereas in the case of pre-school children, the number of children and household income are significant.

With regards to the personality traits that are of interest to us here, it appears that two to three-year-old children of mothers who are characterized by a higher level of conscientiousness, i.e., those who consider themselves to be dutiful and orderly, are less likely to use formal care exclusively, without any additional types of child care. The correlation is insignificant if formal care is combined with informal care. The correlation between the openness of mothers and the combined usage of formal and informal child care has a weak positive significance (Table 3).

A comparison of East and West provides no evidence, in the Eastern German sample, of significant correlations between the type of child care and mother's personality. For Western Germany, the comparison demonstrates the relationship between the mother's openness and the use of child care combinations even more clearly. It is shown that the mother's agreeableness is also significant. Mothers who can be considered agreeable are less likely to combine different types of child care.

When we look at pre-school children, a different picture emerges: here, mothers who are more open to experience and more conscientious are less likely to use a child day care facility if other combinations are not further differentiated. If we do differentiate, only the correlation with conscientiousness remains statistically significant. Other associations are weakly significant such as the positive correlation between extraversion and the use of combinations of other child care forms. This relationship is weakly negative if we examine the use of formal child care exclusively (Table 3). A comparison of East and West demonstrates here, too, that the measured effects apply, almost exclusively, to mothers from Western Germany (no table).

Mother's Openness Correlates with Number of Different Types of Child Care

In further multivariate analyses, we associate the number of different forms of child care with maternal personality traits and other socio-economic variables (Table 4). In this case, we restrict our analysis to children who are not only cared for by their parents. The bivariate findings (Table 1) confirm that employed mothers in particular combine different forms of child care. Furthermore, this also depends on the child's age, the presence of a partner in the household, household income, migration background, and the region in which the family resides. ¹⁴ This applies in particular to two to three-year-olds, whereas the correlation for five to six-year-olds is

¹⁴ This "regional indicator" also reflects the significant differences between Eastern and Western Germany in terms of availability of child day care facilities for children under the age of three.

Table 3

Models Describing the Probability of Using Formal Child Care

Marginal effects

		2-3 years		5-6 years		
	Model I, Logit	Model II, N	Iultinominal logit	Model II, Logit	Model II, N	Aultinominal logit
	Formal child care	Only formal child care	Formal child care and other combinations of child care	Formal child care	Only formal child care	Formal child care and other combinations of child care
Openness	0.023	-0.013	0.036*	-0.013**	0.037	-0.050*
Extraversion	0.033	0.007	0.026	0.002	-0.046*	0.048*
Conscientiousness	-0.008	-0.033**	0.027	-0.013**	-0.052**	0.039
Neuroticism	0.031	-0.005	0.036*	-0.003	0.015	-0.019
Agreeableness	-0.015	0.004	-0.018	-0.004	0.014	-0.018
N	786		786			317
Pseudo R ²	0.230		0.168	0.251	0.123	

The following socio-economic factors were included in all models besides the variables measuring maternal personality: maternal employment status, partner in household, age of mother, maternal education, age of child (in months), gender of child, migration background of child, number of children in household <16 years, logarithmized household income, and region (Eastern or Western Germany).

Sources: SOEP v26 (2005-2009); calculations by DIW Berlin.

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Conscientious mothers are less likely to use formal child care facilities exclusively.

only statistically significant with regard to the mother's full-time employment and household income.

When we consider the mother's personality, it appears that mothers who are more open are more likely to use more types of child care for their two to three-year-old children. The correlation with the extraversion personality trait is only weakly significant. The latter is also only weakly significant for pre-school children which means that the more a mother describes herself as assertive and enthusiastic, the more likely she is to use a variety of forms of care for her children.

Conclusion

The use of formal child care, its combination with other forms of informal child care, and the number of child care settings used are correlated with the mothers' personality, alongside regional and socio-economic factors. However, statistically speaking, personality traits cannot explain much of the variance in child care settings and can only be proven, almost exclusively, for mothers who reside in Western Germany: the more conscientious these mothers consider themselves to be, assuming other factors remain constant, the less likely they are to use a child day care facility without additional forms of child care such as care provided by grandparents. This finding may conceal personal attitudes and assessments

of formal care that cannot be directly measured. It is notable that the correlation between personality and types of day care is almost completely insignificant for Eas-

Table 4

Model Describing the Number of Child Care

OLS estimates, regression coefficients

	2-3 years	5-6 years
	Number of child care settings	Number of child care settings
Openness	0.049**	-0.044
Extraversion	0.045*	0.058*
Conscientiousness	0.021	0.001
Neuroticism	0.032	-0.043
Agreeableness	-0.012	-0.036
N	786	317
Adj. R ²	0.152	0.078

The following socio-economic factors were included in all models besides the variables measuring maternal personality: maternal employment status, partner in household, age of mother, maternal education, age of child (in months), gender of child, migration background of child, number of children in household <16 years, logarithmized household income, and region (Eastern or Western Germany).

Sources: SOEP v26 (2005-2009); calculations by DIW Berlin.

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Correlation between openness and number of child care settings is significant.

^{*} p < 0,10, ** p < 0,05, *** p < 0,01

^{*} p < 0,10, ** p < 0,05, *** p < 0,01

tern German mothers—here, particularly with regard to younger children, employment-related factors are decisive. Furthermore, it appears that mothers who are more open are more likely to use a wider variety of different types of child care.

A family and education policy should take these correlations into account, alongside other objective factors, and should ensure that parents are free to make the decisions that suit their personal preferences. Parents need to be given a range of options in order to be able to do so. A further expansion of day care facilities on offer would provide parents with a wider choice.

From a research perspective, it would be interesting to analyze, using a cross-country comparison, whether the differences between Eastern and Western Germany can also be applied to a comparison between different countries. A comparison could be drawn between countries, where for many years, similarly to Eastern Germany, the majority of children have used formal day care and these forms of child care are widely accepted (e.g, France and the Scandinavian countries) with countries which, similar to Western Germany, have only experienced an increase in the use of such child care in recent years, particularly for younger children (e.g., Austria). It is likely that in countries with a widely established child care system fewer correlations between personality traits and the types of child care used will be found than in other countries.

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Keywords: Child care, personality factors, maternal employment

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Discussion Papers Nr. 1169/2011 Katharina Wrohlich



Labor Supply and Child Care Choices in a Rationed Child Care Market

This paper presents an empirical framework for the analysis of mothers' labor supply and child care choices, explicitly taking into account access restrictions to subsidized child care. This is particularly important for countries such as Germany, where subsidized child care is rationed and private child care is only available at considerably higher cost. I use a discrete choice panel data model controlling for unobserved heterogeneity to simultaneously estimate labor supply and the demand for child care of German mothers with at least one child under the age of seven years. The model can be used to evaluate different kinds of policy reforms, such as changes

in the availability or costs of child care. Results from the illustrating policy simulations show that targeting public expenditures at an extension of child care slots has greater effects on maternal employment than a reduction of parents' fees to existing slots.

JEL-Classification: J22, J13, C35

Keywords: Child care, labor supply, discrete choice, panel study, Germany www.diw.de/publikationen/diskussionspapiere

Discussion Papers Nr. 1168 / 2011 Konstantin A. Kholodilin, Andreas Mense



Can Internet Ads Serve as an Indicator of Homeownership Rates?

In this paper, we propose an indicator of the homeownership rate based on Internet ads offering the housing for rent and sale. We constructed the HOR estimate using the number of ads in four different markets (flats for rent, flats for sale, houses for rent, and houses for sale). Our HOR indicator was tested using data of German NUTS1 and planning (ROR) regions. The correlation between our estimate of the HOR and the alternative HOR figures varies between 0.834 and 0.874 at NUTS1 level and is 0.761 at the ROR level. All correlation coefficients are statistically significant. Our HOR estimate is particularly highly correlated with the official HOR

figures. Thus, it is shown that our Internet-based indices could serve as a good indicator of the homeownership rate in German regions.

JEL-Classification: C21, O47, R11

Keywords: Internet ads, homeownership rate, German regions, NUTS, planning regions www.diw.de/publikationen/diskussionspapiere

Discussion Papers Nr. 1167/2011 Johannes Geyer



The Effect of Health and Employment Risks on Precautionary Savings

This paper extends the idea of using ex-ante risk measures in a model of precautionary savings by explicitly simulating future net-income risks. The uncertainty measure takes into account the interdependency of labor market status and health. The model is estimated for prime age males using the German Socio-Economic Panel Study for years 2001-2007. The empirical analysis is conducted using a measure for saving stocks and saving flows. The latter model allows to control for individual specific effects. I find evidence for precautionary savings in response to the uncertainty measures. The results are robust and stable across specifications. There is

evidence for a share of precautionary wealth of about 14 to 17 percent.

JEL-Classification: D91, E21

Keywords: Precautionary savings, health, employment, risks www.diw.de/publikationen/diskussionspapiere

SOEPpapers 404 / 2011 Elisabeth Bügelmayer, C. Katharina Spieß



Spite and Cognitive Skills in Preschoolers

Although spiteful preferences play a crucial role in the development of human large-scale cooperation, there is little evidence on spiteful behavior and its determinants in children. We investigate the relationship between children's cognitive skills and spiteful behavior in a sample of 214 preschoolers aged 5-6 and their mothers. Other-regarding behavior of both mothers and children is elicited through four simple allocation decisions. A key advantage of our study is that it is carried out in a household context. Therefore, we have information about both the child's and mother's cognitive and noncognitive skills as well as health and household characte-

ristics. We find that higher cognitive skills are associated with more spiteful behavior in children. This relationship is even more pronounced among boys and possibly reflects differences in competitiveness. Moreover, we find further gender differences depending on the measure of cognitive skills and the degree of spite. These results shed light on the determinants of the development of other-regarding preferences in humans.

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