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Language Proficiency and Economic Incentives: The Case of Syrian Asylum Seekers in Germany

May Khourshed, Romuald Méango

01-2020

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mea - Amalienstr. 33_D-80799 Munich_Phone +49 89 38602-355_Fax +49 89 38602-390_www.mea.mpisoc.mpg.de

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Abstract:

Using unique survey data on subjective expectation regarding the return to language proficiency for Syrian asylum seekers in Germany, this study finds evidence that the decision on language acquisition levels responds to economic incentives. This finding fills a gap in the existing literature on migrants' language acquisition decision. In the German context, issuance of a future permanent residence permit is linked by law to the acquisition of certain language skills. The analysis shows that asylum seekers who expect a higher chance to obtain a permanent residence permit from being competent in German have a significantly higher language proficiency. An increases by 10 pp (0.5 standard deviation) of the expected return to language ability increases language proficiency scores by a 0.06 to 0.09 standard deviation.

Zusammenfassung:

Durch Verwendung eines einmaligen Umfragedatesatzes, betreffend den Nutzen von Sprachkompetenz syrischer Asylbewerber in Deutschland, zeigt diese Studie, dass die Entscheidung über das zu erlernende Sprachniveau von wirtschaftlichen Faktoren abhängt. Dieses Ergebnis füllt eine Lücke in der existierenden Literatur bezüglich der Entscheidung von Migranten neue Sprachen zu erlernen. In Deutschland ist der Erhalt einer permanenten Aufenthaltserlaubnis per Gesetz mit dem Erlernen eines bestimmten Sprachniveaus verknüpft. Die Analyse zeigt, dass Asylbewerber, die sich bessere Chancen auf eine permanente Aufenthaltserlaubnis aufgrund einer höheren Deutschkompetenz erhoffen, auch eine deutlich höhere Sprachkompetenz aufweisen. Eine Erhöhung der erwarteten Gewinne von Sprachkompetenz um 10 pp (0,5 Standardabweichung) erhöht die Punktzahl in Sprachkompetenztests zwischen 0,06 und 0,09 (Standardabweichung).

Keywords:

Migration, language proficiency, asylum seekers

JEL Classification:

J61

Language Proficiency and Economic Incentives: The Case of Syrian Asylum Seekers in Germany^{*}

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February 26, 2020

Abstract

Using unique survey data on subjective expectation regarding the return to language proficiency for Syrian asylum seekers in Germany, this study finds evidence that the decision on language acquisition levels responds to economic incentives. This finding fills a gap in the existing literature on migrants' language acquisition decision. In the German context, issuance of a future permanent residence permit is linked by law to the acquisition of certain language skills. The analysis shows that asylum seekers who expect a higher chance to obtain a permanent residence permit from being competent in German have a significantly higher language proficiency. An increases by 10 pp (0.5 standard deviation) of the expected return to language ability increases language proficiency scores by a 0.06 to 0.09 standard deviation.

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^{*}Correspondence address: Munich Center for the Economics of Ageing. Amalienstr. 33, 80799 Munich, Germany. Corresponding author: khourshed@mea.mpisoc.mpg.de.

1 Introduction

This paper studies the effect of economic incentives on language proficiency of recently arrived Syrian asylum seekers in Bavaria, Germany. The economic literature usually classifies the determinants of language proficiency of migrants in to three categories: Exposure, Efficiency and Economic Incentives (the 3 Es). *Economic Incentives* refers to the benefits migrants expect to receive after investing (to varying degrees) into the host country language. ¹ This category includes variables such as the expected duration of stay and the return to language acquisition.² Research relates the three Es with language proficiency as can be seen by the surveys by Adserà and Pytliková (2015) and Chiswick and Miller (2015). Chiswick and Miller (2015), however, best sum up a remaining limitation in the literature: "the most problematic aspect of the research on the determinants of destination language skills is estimating the impact on proficiency of the expected increase in earnings as an explanatory variable. Data are not available for this on an individual basis." We contribute to this literature by providing such data.

This paper brings together the above stream of literature with more recent literature on the elicitation of subjective expectations in order to measure economic incentives on language acquisition. Typically, respondents are directly asked about expected earnings and the expected probability of realization of given outcomes in different counterfactual scenarios (see Manski, 2004). This approach has now been applied to many economic questions, including the choice of contraceptive methods (Delavande, 2008), the choice of college major (Beffy, Fougere, and Maurel, 2012; Wiswall and Zafar, 2015), and the willingness to migrate illegally (Bah and Batista, 2018).

We contribute to this literature by collecting unique survey data on recently arrived Syrian asylum seekers in Bavaria. The survey elicited the expected increase in earnings, chance to obtain a residence permit and chance to obtain a secure job, from becoming

 $^{^{1}}Exposure$ to the host language refers to the interaction an immigrant has with the host country language before and/or after migration.

²The second category is usually measured by the education level of the person, age at migration, native language similarity to host language and motive to migrate. *Efficiency* refers to the ability to convert said "exposure" to actual language ability.

more proficient in German. It also conducted different assessments of the respondents' German language skills. These measures allow for the direct estimation of the effect of economic incentives on language proficiency.

The Qualifications, potentials and life courses of Syrian asylum seekers (QPLC) survey focused on the most numerous nationality present in the recent wave of asylum seekers in Germany, Syrians. The fieldwork was conducted in Bavaria in 2017 and collected 272 computer assisted personal interviews (CAPI). Data on subjective expectations about earnings, chance to obtain a permit and chance to obtain a job are available for (up to) 141 respondents. The survey asks about the return to language investment levels from the popular Common European Framework of Reference for Languages (CEFR) standard. We focus in our analysis on the B1-level, which corresponds to lower intermediate proficiency, as it is a minimum level requirement by the German government in order to receive more permanent legal statuses and is perceived as the minimum language needed to apply for jobs in Germany. We find that asylum seekers expect an important return to language acquisition in term of monthly earnings: on average 253 Euros, that is a 30% increase. They also expect an important increase in their chance to obtain a permit (about 25 percentage points (pp)) and chance to obtain a job (28 pp).

Language proficiency is measured using two instruments. Trained interviewers were asked to rate the respondent skills following a short conversation in German. Furthermore, respondents took two short written language tests. On the whole, we find individuals scored relatively low in these tests. For example, 38% failed to understand at all the short conversation test.

Putting language proficiency and expected returns in relation, we find that individuals who expect a higher chance to obtain a permanent residence permit from being proficient have a significantly higher language proficiency. A 10 pp increase in the aforementioned expectation increases the score of the conversation test by about 0.6 to 0.75 standard deviation.

The structure of this paper is as such: section 2 gives some background information about the survey and the German context. Section 3 describes the data of our study, section 4 analyses the effect of interest in a multivariate analysis. Section 5 outlines the major implications and concludes.

2 Background information

The Qualifications, potentials and life courses of Syrian asylum seekers (QPLC) survey was motivated by the necessity to understand the experiences, motivations and investment decisions that newly arrived Syrian asylum seekers in Germany have or undertake. Syrians are the most numerous nationality present in the recent wave of asylum seekers in Germany, starting in 2014. It is estimated that over 557,000 entered Germany between 2014 and 2018 and applied for asylum protection (BAMF, 2019a). The recognition rate among Syrian asylum seekers was relatively high (97% in 2015 and 99% in 2016). Most Syrians obtained a rather secure legal status protection for about two years (2015: 97% refugee (Geneva convention) status ; 2016: 57% refugee status and 42% other positive decisions) (Burmann and Valleyatheepillay, 2017).

As part of the political push to ensure that asylum seekers are substantially integrated into the German society, asylum seekers, especially those who have a high chance of receiving residence status and remaining in Germany, including Syrians, are required to attend German language courses. These language courses were mainly in the form of an "Integrationskurs" which consisted of mainly language learning but also included lessons on culture, society and history. Integration courses differ from regular language courses in that: they include an extra cultural, social and history section, are fully subsidized by the state, and only include up to B1-level German language. Indeed, in some cases, benefits could in turn be reduced if asylum applicants did not attend. An integration course normally takes six months, assuming no interruptions (BAMF, 2020).

An important aspect of the German migration legal framework that relates to our study are the requirements in place for asylum seekers to obtain a permanent residence permit since August 2016. In order to receive this status individuals must prove that they have proficiency of the German language and society and enough means to secure their livelihood (BAMF, 2019b). Normally they could apply between three to five years given their language proficiency level and ability to financially provide for themselves and their family. We show below that asylum seekers correctly expect higher chances to obtain a permanent residence permit if they are more proficient in German. This in turn seems to increase their current language proficiency.

3 Data

The target population of the QPLC survey comprised of persons aged 18 or older with Syrian nationality who entered Germany starting from 2014, in order to apply for protection. The fieldwork was conducted in Bavaria, lasted from May to December 2017 and collected 272 CAPI interviews. The module on subjective expectation was only implemented in the second phase of the fieldwork. Data on subjective expectations about earnings, chance to obtain a permit and chance to obtain a job are available for 141 respondents. The sample is relatively small but comparable to that of other studies that use subjective expectations (e.g. Delavande, 2008; Beffy, Fougere, and Maurel, 2012; Gong, Lochner, Stinebrickner, and Stinebrickner, 2019).

In the following, we present the main characteristics of the sample used in this study, as well as the main measures of interest: measures of language proficiency and measures of subjective expectations. For more details on the study, the sample methodology and the sample characteristics, we refer the reader to Khourshed, Hunkler, Méango, and Börsch-Supan (2019).

3.1 Sample characteristics

The sample that received the module on subjective expectation consists of 141 individuals, among them 37 are female (26.2%). This gender split is closely in line with German statistics on this poulation (Khourshed, Hunkler, Méango, and Börsch-Supan, 2019). They are relatively young with a median age of 28 years, with an age range from 18 to 66. About 8% have never attended school, while 17.7% have primary education, 31.9%

lower secondary education, 24.1% upper secondary education and 18.4% some tertiary education. Females are generally less educated than men. The respondents have been between 2 and 46 months in Germany at the time of the interview, with a mean duration of 19.5 months. Please see table 5.1 for more information.

3.2 Measures of Language proficiency

The test of German language skills comprised of three parts: a word recognition section, a sentence grammar structure section and a short conversation exercise, see figure 3.1. A common critique in the literature is the use of self-reported language ability (Chiswick and Miller, 2015). In using more objective measures we hope to improve our identification of language proficiency.

The first two tests were paper-pencil tests. For the first part, word recognition, respondents were asked to identify the correct name and article of five images. The second part, grammatical structures, asked respondents to place German words into the correct grammatical sentence structure. From these items, we construct a test score for each respondent which sums all correct responses (maximum of 8). The distribution has a mass at zero, a reflection of the little understanding some respondent had of German. 5.17% of the respondents completed both tests without mistake.

Respondents were also asked to take part in a short and simple conversation about the weather, how they liked it and how it differs from their country of origin. The interviewers were trained to rate the conversation in terms of sentence structure, word usage and pronunciation. Scoring followed a predetermined scaling format — a five-point grading scheme adherent to the German grading system [5: insufficient to 1: excellent]. On the whole, we find individuals scored relatively low with 38.64 % of our entire sample achieving a score of five, i.e. failed to understand at all. The average grade within the sample is 3.57, i.e. "poor". Although, the entirety of the sample performed poorly, on average, women did so significantly more than men with a mean score of 4.05 compared to men's 3.40.



Figure 3.1: Distribution of Language Test Scores

3.3 Measures of Economic Incentives

The survey included a module on respondents' subjective expectations regarding different human capital investments. Respondents were first trained to provide answers as a percent chance. Understanding of the concept of likelihood was tested using the Hudomiet, Hurd, and Rohwedder (2018) battery of questions. Our respondents generally performed on par with respondents of the Hudomiet, Hurd, and Rohwedder (2018) study.

The respondents were then asked to state their expectations about the percent chance to obtain a permanent residence permit in Germany, obtain a secure job in Germany, and their expected monthly earnings. These expectations were elicited under: no extra education (baseline) undertaken by respondent, and after obtaining a B1-proficiency language level. Expectations were also elicited for additional investments: obtaining a B2proficiency language level, a vocational training (in German "Ausbildung"), or a university degree. We focus in this analysis on B1, given its prominence in German legislation, integration course requirements, and job market preferences. The exact formulation of the question is presented in the Appendix.

Figure 3.2 shows the distribution of the variables reporting the expected monthly earning, the percent chance to obtain a permanent residence permit in Germany, and to obtain a secure job in Germany, with and without the B1-level.

There is a clear first-order stochastic dominance of the outcomes when the individual has a B1-level. The expected monthly increase in earnings is on average 253 Euros, a 29.4% increase in earnings from the baseline (without B1). Furthermore, 8 out of 10 respondents expect a strictly positive earnings increase.

Regarding the expectation to receive a permanent residence permit, respondents report on average a fairly low chance without B1-level (14.1%). Obtaining a B1-level triples this probability to 40.6%. The picture is the same for the chance to obtain a secure job (from 16.9% to 45.1%), although the variance in the reported expectations is higher in this case.

Thus, asylum seekers seem to expect a fairly significant return to language proficiency.

4 Regression Analysis

This section analyses the effect of the aforementioned economic incentives on the language proficiency. A reduced form equation that describes the relation between both sets of variables can be written as follows:

$$L_i = I'_i \alpha + X'_i \beta + u_i \tag{4.1}$$

where i is a subscript for an asylum seeker in the population of interest. L represents a measure of language proficiency. We will use alternatively the results of the two language tests described in section 3.2. I is a vector of economic incentives. It includes the difference between the individual-specific expected probability to obtain a permanent residence permit with a B1-level and the same probability without a B1-level. It also includes the



Figure 3.2: Smoothed probability distribution function of expected outcomes

same differences for the probability to obtain a secure job and for expected earning. X is a vector of control variables that can affect both the economic incentives and the language level attained. As is common in the literature, we include gender, education, age, the number of months in Germany, and the square of months. These variables are, in turn, the most common determinants of language proficiency measuring exposure and efficiency.

We exclude two observations that report a large decrease of income (larger than 400 Euros monthly) from acquiring a B1-level, as outliers. Furthermore we reverted the scale of the language test so that higher values correspond to better performances.

The results of this exercise are summarized in Table 4.1.

Column (1) to (4) present the results for the paper-pencil test with different specifications, while Column (5) to (8) present the results for the conversation test. The measures of economic incentives are first included one by one, starting with the increase in the chance to obtain a permanent residence permit (columns (1) and (5)), followed by the chance to obtain a secure job (columns (2) and (6)), and the increase in earnings (columns (3) and (7)). Columns (4) and (8) include all economic incentives measures. Note that the earnings return to a B1-level is available only for a smaller sample of respondents, due to a higher prevalence of non-response.

The estimated coefficients for the control variables appear to all have the expected signs and magnitude. German language proficiency increases significantly with the respondent's education and the number of months since arrival, but decreases with age. Women seem to have less language skills than men.

Turning to the expected return to language proficiency in term of chance to obtain a permanent residency, column (1) and (5) show that on average an increase of 10 pp (0.5 standard deviation) increases the score of the paper-pencil test by 0.26 points (0.09 standard deviation) and the conversation grade by 0.09 points (0.06 standard deviation). The finding of this strong effect seems congruent with the German legal context which links language proficiency to the issuance of a permanent residence permit.

Regarding the expected return in terms of chance to obtain a secure job, the effect is noisily estimated and unstable across specifications. So is the effect of the earnings

	Paper-pencil				Conversation					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Perm. residence	0.026^{***} (0.007)			$\begin{array}{c} 0.033^{***} \\ (0.011) \end{array}$	0.009^{*} (0.005)			0.015^{**} (0.006)		
Secure job		$0.007 \\ (0.011)$		-0.006 (0.017)		-0.003 (0.006)		-0.009 (0.009)		
Earnings			-0.001 (0.001)	-0.001 (0.001)			-0.001^{*} (0.001)	-0.001^{**} (0.001)		
Female	-0.920^{*} (0.472)	-1.054^{**} (0.511)	-0.449 (0.687)	-0.255 (0.667)	-0.370 (0.268)	-0.380 (0.274)	-0.178 (0.343)	-0.084 (0.348)		
Primary	-0.268 (1.126)	-0.268 (0.727)			0.715^{*} (0.406)	$\begin{array}{c} 0.856^{**} \\ (0.354) \end{array}$				
Lower Sec.	1.732 (1.133)	1.637^{**} (0.778)	$2.127^{***} \\ (0.624)$	$2.376^{***} \\ (0.616)$	$\begin{array}{c} 1.614^{***} \\ (0.406) \end{array}$	$1.859^{***} \\ (0.407)$	$\begin{array}{c} 0.974^{***} \\ (0.337) \end{array}$	$\begin{array}{c} 1.121^{***} \\ (0.339) \end{array}$		
Upper sec.	$1.860 \\ (1.162)$	1.781^{**} (0.798)	$2.678^{***} \\ (0.693)$	$2.714^{***} \\ (0.670)$	$1.416^{***} \\ (0.406)$	$\begin{array}{c} 1.670^{***} \\ (0.393) \end{array}$	$\begin{array}{c} 1.052^{***} \\ (0.370) \end{array}$	$\begin{array}{c} 1.167^{***} \\ (0.360) \end{array}$		
Tertiary	$1.640 \\ (1.236)$	1.564^{*} (0.900)	$2.143^{***} \\ (0.783)$	$2.285^{***} \\ (0.779)$	$2.177^{***} \\ (0.521)$	$2.427^{***} \\ (0.516)$	$\begin{array}{c} 1.466^{***} \\ (0.439) \end{array}$	$\begin{array}{c} 1.595^{***} \\ (0.459) \end{array}$		
Age	-0.049^{***} (0.018)	-0.042^{**} (0.020)	-0.026 (0.026)	-0.045^{*} (0.025)	-0.035^{***} (0.009)	-0.031^{***} (0.010)	-0.023^{*} (0.013)	-0.033^{**} (0.013)		
Months	$\begin{array}{c} 0.318^{***} \\ (0.075) \end{array}$	0.327^{***} (0.080)	$\begin{array}{c} 0.309^{***} \\ (0.101) \end{array}$	0.266^{**} (0.104)	$\begin{array}{c} 0.129^{***} \\ (0.038) \end{array}$	$\begin{array}{c} 0.141^{***} \\ (0.042) \end{array}$	0.102^{**} (0.049)	0.086^{*} (0.048)		
Months squared	-0.006^{***} (0.002)	-0.006^{***} (0.002)	-0.005^{**} (0.002)	-0.004^{*} (0.002)	-0.002^{**} (0.001)	-0.002^{**} (0.001)	-0.001 (0.001)	-0.001 (0.001)		
Constant	$0.949 \\ (1.595)$	1.134 (1.440)	$0.260 \\ (1.564)$	$0.660 \\ (1.568)$	$0.323 \\ (0.679)$	$0.134 \\ (0.661)$	$1.126 \\ (0.816)$	1.415^{*} (0.814)		
Observations Adjusted R^2	$120 \\ 0.324$	119 0.279	81 0.223	81 0.273	$\begin{array}{c} 116\\ 0.236\end{array}$	$115 \\ 0.225$	$78 \\ 0.190$	$78 \\ 0.217$		

Robust standard errors in parentheses. * p < 0.10, **p < 0.05 *** p < 0.01

Table 4.1: Regression results

returns, which appears surprisingly negative and significant in Column (7) and (8).

There is a concern that unobserved characteristics, which affect both the measured economic incentives and the language proficiency, might bias the estimation. For example, respondents with a high innate ability might be more efficient at learning German, but might also expect a higher return to do so. To mitigate this concern and assess the robustness of the above results, we include two further control variables. Respondents took part in two paper-pencil tests to measure fluid and crystalline intelligence. We include the measure of the crystalline intelligence test, as the measure is highly correlated (for details, see Khourshed, Hunkler, Méango, and Börsch-Supan (2019)). Furthermore, some asylum seekers arrived in Germany with some knowledge of the English language. This might have facilitated their acquisition of German, compared to otherwise similar asylum seekers who only spoke Arabic. Respondents were asked to rate their language skills in English on a likert-scale. This measure of language skills in English appear positively correlated with those in German (correlation coefficient of 0.39 with the conversation grade). We include it as a control variable in equation 4.1.

	Paper-pencil				Conversation				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Perm. residence	0.021^{***} (0.007)			0.029^{***} (0.010)	0.008^{*} (0.004)			0.015^{***} (0.005)	
Secure job		-0.002 (0.012)		-0.003 (0.015)		-0.005 (0.006)		-0.006 (0.007)	
Earnings			-0.000 (0.001)	-0.001 (0.001)			-0.001 (0.001)	-0.001 (0.001)	
Observations Adjusted R^2	$110\\0.421$	$109 \\ 0.389$	76 0.363	$76\\0.404$	$107 \\ 0.360$	$106 \\ 0.359$	74 0.408	$74\\0.440$	

Robust standard errors in parentheses.

* p < 0.10, **p < 0.05 *** p < 0.01

Table 4.2: Regression results including cognitive test and English skills

Table 4.2 reports our main coefficients of interest in a similar format as above. The estimated coefficients are stable, which is reassuring. Only the increase in expected chance to obtain a residence permit appear to affect the language proficiency, at a similar magnitude to our previous specification. The remaining coefficients are small and

statistically non different from zero at conventional levels.

5 Discussion

Language acquisition is very important for migrants in general and asylum seekers in particular as it allows for integration into the host country. This study finds evidence that language acquisition of Syrian asylum seekers in Germany responds to economic incentives.

In the German context, issuance of a permanent residence permit is linked by law to the acquisition of certain language skills. The analysis shows that individuals who expect a higher chance to obtain a permanent residence permit from being proficient in German have a significantly higher language proficiency. An increase by 10 pp (0.5 standard deviation) of the expected return to language proficiency increases language proficiency by 0.06 to 0.09 standard deviation. This result remains stable after controlling for a measure of cognitive abilities and English language skills. We do not find similar effects for other incentives such as the chance to obtain a secure job or expected earnings. This finding emphasizes the importance of host countries' policies for the integration of asylum seekers.

Although the sample is small, it gives interesting insights on an important question that was so far unanswered. This should be a motivation to collect additional data on individual expected returns to language proficiency on a greater scale. One limitation of the methodology is that incentives and actual investments are observed at the same time. It would be desirable to observe the economic incentives first and then investments with some time delay, given that individuals could rationalize their investments ex-post. This in turn bolsters the need for panel data to measure the causal effect more precisely.

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Appendix

	Mean	SD	Min	Max	Count
Dependent Variables					
Testscore	4.418	2.772	0	8	141
Convscore	2.432	1.463	1	5	132
Independent Variables					
Female	0.262	0.441	0	1	141
Education level in CO	2.276	1.183	0	4	141
No Educ.	0.780	0.269	0	1	
Primary	0.177	0.383	0	1	
Lower Sec.	0.319	0.467	0	1	
Upper Sec.	0.241	0.429	0	1	
Tertiary	0.184	0.389	0	1	
Age	30.690	10.351	18.416	66.333	141
Months (time in DE)	19.481	7.936	2	46	137
Earnings (Exp. wage: B1-No Lang.)	266.216	257.570	0	1491	83
Perm. Residence (Exp. permit res.: B1-No Lang.)	25.918	21.673	-10	90	122
Secure Job (Exp. job: B1-No Lang.)	27.628	20.889	-50	80	121

Table 5.1: Summary Statistics of Dependent Variables

Elicited Expectations Questions

Imagine an individual like you, that is, with the same gender, age, education, etc. We would like to ask you what the chance is that some scenarios happen. Imagine that the person is in either of five cases:

- 1. He/She has not completed any type of course or education in Germany,
- 2. He/She has completed a basic German language course or an integration course (level B1),
- 3. He/She has completed an advance German language course (level B2),
- 4. He/She has completed a vocational training degree ("Beruflicher Ausbildungsabschluss") in Germany
- 5. He/She has completed a university degree in Germany.
- For each of these cases, what do you think is the percent chance that the individual will obtain a permanent residence in three years? Please give a number or mark

your answer on the scale.

- For each of these cases, what do you think is the percent chance that the individual will obtain a good and secure job in three years? Please give a number or mark your answer on the scale.
- For the first case (no education in Germany), what do you think is the monthly wage that the individual can expect in Germany? Please give the currency.
- For the remaining cases, what do you think is the monthly wage that the individual can expect in Germany after successfully completing the course or degree? Please give the currency.