## Untapped potential: Professional degree recognition and (un)paid work of migrant women

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In recent years, numerous industrialized countries have witnessed a significant demographic transition characterized by a growing contingent of immigrants, with women comprising a key group with untapped potential. While scholars and policymakers increasingly recognize the importance of immigrant women's economic contributions to both their households and the host country's economy (Orav, 2023), they persistently face integration obstacles resulting in less paid labor and more unpaid labor performed, when compared to other groups (Blau et al., 2020; Kamm et al., 2020; Kraszewska, Juchno and Todorova, 2020).

Evidence on effective measure to foster the labor market integration of migrant women while reducing their household and care responsibilities is scarce. In particular, facilitated recognition of foreign occupational qualifications has been shown to be an effective measure to make labor market integration work (Anger et al., 2022; Brücker et al., 2021; Sweetman & van Ours, 2015; Tibajev & Hellgren, 2019). Degree recognition might be particularly important for women, as they often have a secondary role in family migration decisions<sup>1</sup>, resulting in their lower (certified) human capital and earning potential in the

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 $<sup>^{1}</sup>$ In Germany, 40 % of women report coming to Germany due to a family move, and an additional 15% come here for their partner. Source: German Microcensus (2020), own calculation.

destination country (Cooke et al., 2009), as well as gendered division of household and child-rearing tasks (Fendel & Kosyakova, 2023).

In this paper, we study the role of standardized and improved degree recognition procedures on paid and unpaid labor of migrant women, also considering potential effects on family formation outcomes. To establish causality, we exploit the Federal Recognition Act implemented in 2012 in Germany within a flexible difference-in-difference framework. The identification strategy relies on the differences in degree recognition procedures between EU and non-EU migrants before and after the implementation of this regulation. Before the reform, individuals with degrees from outside the EU had to undergo a case-by-case process, thus adding substantial uncertainty around applying and receiving recognition in Germany. After 2012, individuals with degrees from outside the EU were included in the standardized process for the proof of equivalence between German and non-German certificates, a process that their EU counterparts have used since 2005. In addition to this national reform, we exploit further variation across federal states and type of regulation of the occupation.

This paper combines two strand of the existing literature - one researching educational returns of migrants in the host country and another one examining the immigration experience of women. While previous work has studied the positive relationship between migrant labor participation and job seeking programs (Sarvimäki & Hämäläinen, 2016) or language requirements (Giesecke & Schuss, 2019), relatively few papers concern themselves with degree recognition or have a strong gender focus. With our work, we add to the discourse around gender parity, as EU institutions identify migrant women as an key group, yet policies rarely tailor to their needs (OECD, 2022).

In a previous paper, Anger et al. (2022) note that particularly women receive a high return to their recognized education, yet fail to elaborate on potential mechanisms and explanations. We fill this gap in the literature by examining individual changes in paid and unpaid work in response to a shock to their opportunity cost, as well as contribute to the literature on partner division of household tasks, which often only observes associations between partner choices and their household production function and cannot infer causality. Last but not least, as other papers show causal effects of integration measures on family formation, (Gihleb, Giuntella and Lonsky, 2023; Lanari, Pieroni and Salmas, 2020) we are one of the first papers to offer evidence on how immigration policies, un-

related to family planning, affect highly-educated women. This is important as flexible labor markets and access to family-friendly policies are often listed as determinants of family formation in high-income countries (Doepke et. al., 2023).

The empirical analysis is based on data from the German Microcensus and the SOEP panel, from 2005 to 2020. Our approach leverages large sample sizes to obtain accurate and representative results for migrant subgroups in Germany, including also women that have not been formally employed and are often missing from labor administrative datasets. We research traditional markers of paid employment (employment status, working full-time), as well the occupational match between degree characteristics and current job. For unpaid labor, we analyzed the time spent on tasks such as housework, childcare, as well as a sum of different types of unpaid work. Our sample includes individuals aged 18 to 60 arriving in Germany in 2012 or earlier. Due to the data limitations, we estimate an intent to treat model, examining individuals with foreign degrees based on eligibility to apply for the recognition process.

We find that post-reform, women eligible to apply for foreign degree recognition perform more paid work: They are 5.7 percentage points more likely to be employed, as well as 3.2 percentage points more likely to work full-time. Furthermore, their likelyhood for searching for a new position while employed decreases, which we interpret as a better match between their work and their qualifications. This treated group also decreases their time spent on tasks such as cooking or cleaning by 17 minutes on a daily basis. We identify that women who are younger and have university degree are particularly affected by this policy and increase their employment. Furthermore, after the reform, eligible migrant women from outside the EU are more likely to be single, as well as have fewer children and at a later age compared to EU women. To rule out that our results are driven by general time trends or changes in labor market conditions for women from outside the EU that not captured in our models, we run regressions using the group of non-EU citizens who have received a professional degree in Germany as a placebo treatment group. We also carefully assess the sensitivity of our results when altering the sample restriction with respect to age, the survey year and number of included countries of origin.

The results suggest that better degree recognition processes can substantially reduce the double disadvantage of immigrant women, in particular by affecting the distribution of non-market work within households. In addition, it might be a cost-efficient measure to boosts employment numbers in Germany, especially in key sectors such as health-care, underscoring the role of educational investment in the light of staff shortages and demographic changes. Improved labor market outcomes also promote human capital accumulation and general welfare for the migrants and their families, and help them better prepare for their future. Studying these changes in educational returns for an important segment of the population can yield a multitude of policy implications, as well as contribute to the general discourse around migration and care work.

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