

## Occupational Choice and Career Experiences

### Pathways into Self-Employment in the United States and Germany\*

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#### Summary

*Using longitudinal data from the Panel Study of Income Dynamics and the German Socio-Economic Panel, this research compares pathways into self-employment among men and women in the United States and Western Germany. Academic and vocational credentials are more important for stabilizing self-employment in the United States than in Germany, where the lack of credentials is a significant deterrent to self-employment entry. Intergenerational transmission of self-employment is more prominent among men than among women in both countries, while spousal transmission of self-employment status is more prominent among women. In both countries, women's self-employment mobility is sensitive to domestic responsibilities.*

#### 1. Introduction

Self-employment was viewed throughout much of the twentieth century as an organizational form in decline. In an era dominated by assembly line mass-production, self-employment was viewed as a throwback to the dawn of capitalist development, when business owners handed down the family firm to their sons, and petty bourgeois tradesmen learned their craft from their fathers. More recently, self-employment has come into focus as a key feature of postindustrial economies, sometimes seen as a critical engine for growth in the new economy (e.g., OECD 1998), sometimes assailed as evidence of a disturbing rise in the share of jobs with little or no employment security in postindustrial economies (e.g., Kalleberg, Reskin, and Hudson 2000). Implicit in each of these conceptualizations of the "new self-employment" is the presumption that traditional career pathways into self-

employment have been replaced by very different mechanisms.

If the self-employment sector has undergone a radical restructuring in recent decades, we might expect a weakening of traditional pathways into self-employment, notably (1) intergenerational transmission of self-employment and (2) educational and occupational credentials. At the same time, recent shifts in labor market demographics suggest that (3) spousal transmission of self-employment may be emerging as a key pathway into self-employment, and (4) domestic responsibilities may spur working mothers in particular into the self-employment sector. The extent to which each of these pathways structures self-employment entry and the stability of self-employment is likely to vary across societies depending on social institutions that structure employment participation and job mobility. This paper compares the pathways into self-employment for men and women in the United States and Germany, countries that are well matched in terms of their position in the world economy yet with strong differences in labor market institutions and female labor force participation.

#### 2. Postindustrial Pressures and New Opportunities

Expanding opportunities for self-employment in postindustrial economies may be linked to traditional pathways into self-employment, for several reasons. First, fewer workers at the end of the twentieth century had self-employed parents than was the case at mid-century, and in an era of rapid technological change the material, human, and social capital that self-employed parents could

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bestow on their children may be less advantageous than in a less turbulent era. Second, if the pace of technological change outpaces the adaptive capacity of institutional rules that link occupations to vocational training, credentials will be less useful as mechanisms to foster self-employment entry and stabilize self-employment careers. Third, demographic shifts in the labor market — especially the rise in married women's labor force participation — challenge the traditional models of self-employment.

Gender differences in self-employment are well established. Self-employed women earn less than self-employed men, they are more likely than men to engage in part-time self-employment, to have less stable self-employment careers, and to be engaged in personal services (e.g., Arum 1997; Carr 1996). Self-employment offers an opportunity for married women with young children to participate in paid work without making a commitment to a job that compromises their primary responsibilities in the home (Carr 1996).

While family responsibilities provide one new, gender-specific pathway into self-employment, dual-earner households can also provide a second new pathway into self-employment, as spouses use their joint labor market activities to incubate a new business. Spousal transmission of self-employment may include businesses that are “traded” from one partner to the other, or the successful business may draw in both partners, in much the same way that parents formerly drew their children into the family firm.

### 3. Country Differences in Institutional Arrangements

While there is no reason to think that the effect of parental resources is different in the United States and Germany, the relationship between credentials and self-employment is likely to be much stronger in Germany. The strong links between employment and training in the German wage and salary sector are also evident in the self-employment sector, notably in the craft sector where the *Handwerksrecht* legally restricts business ownership in over one hundred trades to artisans who hold (or employ someone who holds) the required occupational credential (Grant and Streeck 1985). In contrast to Germany, the loosely structured labor markets in the United States foster higher levels of voluntary and involuntary job mobility, and United States work careers are marked by greater uncertainty and greater flexibility.

Newer pathways into self-employment are likely to be more prominent in the United States than in Germany, in part due to the more flexible market institutions in the United States, and in part due to the different levels of female labor force participation. German women are less likely than women in the United States to be in paid employment when their children are very young, and more likely to work part-time when they return to employment.

Self-employment may provide mothers a flexible employment option; moreover, the prevalence of dual-career households in the United States suggests that spousal transmission of self-employment status may be more prominent in the United States.

In sum, I expect similar patterns of intergenerational transmission of self-employment in the two countries, with greater reliance on career credentials in Germany than in the United States. Domestic responsibilities are likely to be associated with women's self-employment entry, more so in the United States than in Germany, and I expect spousal transmission of self-employment status to be more prominent in the United States than in Germany.

### 4. Data and Methods

The data for these analyses comes from fourteen consecutive waves of the Panel Study of Income Dynamics (PSID), and German Socio-Economic Panel (GSOEP), covering the years 1984-1997. The United States data exclude the Latino subsample added to the PSID in 1990. The German data exclude the subsample of households from the former East Germany and the immigrant subsample begun in 1994. Measures of income and hours for these data come from the Cross-National Equivalent File (Wagner, Burkhauser, and Behringer 1993).

The analysis sample includes observations on men and women aged 25-54 who were interviewed as sole heads of households or as partners in couple-headed households for at least two consecutive waves, and who were employed at the time of at least one interview. Longitudinal weights were used in the analyses to correct for differential probabilities of sample selection and retention, resulting in the exclusion of respondents in each dataset who are married to sample members but are not themselves sample members. Finally, farmers and their partners were excluded from the analysis.

The working definition of self-employment in this study includes main jobs held by respondents who were employed at the time of the interview as workers on their own account, employers, or unpaid family workers in incorporated and unincorporated businesses. Respondents were queried about current work status and job changes during the course of the previous calendar year, and the responses to these questions were used to code spells of employment (including marginal or irregular employment) and nonemployment (including temporary layoffs and family leave). Respondents to the PSID were coded as self-employed if they reported that on their main job they worked primarily for themselves, or for themselves and others. In the GSOEP, job spells were classified as self-employment spells if the respondent reported a shift into self-employment at the start of the spell, if the respondent reported being self-employed at any time during the spell,

or if over the entire course of the job spell the respondent reported receiving mainly self-employment income.

The transition analyses use conventional discrete-time event history methods to model the pathways into and out of self-employment. Since self-employment is one of several competing job mobility outcomes for respondents who are in the risk set for a shift into self-employment, the entry analyses use multinomial logit models to estimate the conditional annual probability of (1) a transition into self-employment as opposed to (2) taking a job with a new wage and salary employer, (3) remaining in the current position or, (4) leaving the workforce, if employed at the onset of the risk period. Separate analyses were performed by country and gender, and also by risk sets defined by origin state, that is, whether the respondent held a wage and salary job or was not employed at the onset of each observation period. Over the fourteen waves covered by this study, respondents can enter and re-enter either risk set, or move from one risk set to another. The entry results reported in this paper are for the contrast between (1) transitions into self-employment and (2) transitions to a new wage and salary employer (other results available from the author). The small number of exits precluded any distinction among destination states, so the event history analyses for exit from self-employment are modeled using binary logit. The transition analyses include controls for age (measured in years — 25 to facilitate interpretation) and spell duration (measured in years since age 25 or start of spell), a dummy for whether respondent's spouse or cohabiting partner lives in the household, and the following measures of traditional and new pathways into self-employment:

- *Intergenerational Transmission of Self-Employment.* Parental self-employment in the United States is measured using a combination of respondents' reports that their father was "a self-employed businessmen" and matched data from parental interviews dating back to 1968. Respondents whose father or mother reported being self-employed during at least five interviews, or whose parents together reported at least seven years of self-employment, are coded as having self-employed parents. In Germany, parental self-employment is measured using respondents' reports on father's occupation from the biographical interview. In both countries, parental self-employment was restricted to non-farm self-employment.
- *Career Credentials* are coded by combining academic credentials and vocational training. Five categories of credentials are included for the United States: less than a high school degree; high school degree or equivalency; some college or vocational certification (excluding employer training) beyond high school; four-year college degree; and advanced academic degree (master's or doctoral). Respondents in Germany are coded as having no vocational credentials or voca-

tional training outside Germany; an apprenticeship (*Lehre*); vocational training beyond the apprenticeship; or a University degree. Most workers in Germany hold some occupational credential, but a substantial number of workers report a mismatch between their occupational credential and their current job. The exit analyses include a measure of "credential fit" for respondents in Germany who report that their current job is the job for which they trained.

- *Spousal Transmission of Self-Employment* is measured using a time-varying indicator variable for married respondents whose partner was self-employed at the onset of the risk period.
- *Domestic Responsibilities* are measured as the presence of one or more child under age six.

## 5. Results

Tables 1 and 2 show the results of the analysis of pathways into self-employment for men and women in the United States and Germany, respectively. The exponentiated constant term represents the relative transition rate for self-employment versus wage and salary

employer mobility  $\left( \frac{\Pr(y = \text{new SE} \mid \Delta t = 1)}{\Pr(y = \text{new WS} \mid \Delta t = 1)} \right)$  for married

respondents with a high school degree (United States) or *Lehre* (Germany) aged 25 at the start of the risk period, with no young children in the household, and no spousal or parental self-employment. In the United States, the relative risk of self-employment is lower among jobholders than those without a job (Table 1); the reverse is true in Germany (Table 2).

Credentials among men in the United States structure the pathway from wage work into self-employment, but the effect is nonlinear (Table 1, column 1). Men with the lowest levels of schooling have a relative transition rate that is 1.76 times higher than men with a high school degree, and among men with any academic or vocational training beyond high school the transition rate increases with the level of credentials. Among employed men who shift employers, those with advanced degrees are most likely to become self-employed. Credentials are the most important determinants of self-employment entry among employed men in the United States: neither parental self-employment nor partner's self-employment is a significant factor. The opposite is true from men who move into the workforce from non-employment (column 2). Career credentials have much less of an impact on men's transitions into self-employment from non-employment. Instead, intergenerational transmission of self-employment remains an important pathway for United States men who are moving into the workforce, increasing the relative risk of self-employment over three-fold for new entrants/re-entrants into the workforce.

Table 1

**Discrete Time Event History Coefficients for Contrast between Transitions into Self-Employment vs. Transitions to New Wage and Salary Employer, United States, Men and Women 1984–1997 (z-Statistics in parentheses)**

	Men				Women			
	At Work Mean	Coeff	Not at Work Mean	Coeff	At Work Mean	Coeff	Not at Work Mean	Coeff
Tenure/Duration	6.56	0.065 (3.33)	1.26	0.218 (2.04)	4.85	0.008 (0.24)	2.30	−0.012 (0.37)
Age (Years-25)	12.50	0.016 (1.67)	13.33	0.018 (1.34)	12.96	0.006 (0.56)	12.23	0.017 (1.83)
<b>Schooling/Training</b> (omitted: high school)								
Less than high school	24.6%		26.4%		26.6%		27.8%	
Some college or high school + vocational certificate	10.2%	0.565 (2.34)	23.7%	0.035 (0.13)	10.5%	0.204 (0.65)	22.8%	0.249 (1.17)
Bachelor's degree	33.2%	0.384 (1.98)	35.8%	−0.542 (1.92)	37.9%	0.034 (0.18)	33.1%	0.004 (0.02)
Advanced degree	25.0%	0.519 (2.52)	11.4%	−0.400 (1.19)	18.8%	−0.012 (0.05)	12.3%	0.100 (0.44)
Parent self-employed	7.1%	0.755 (2.54)	2.7%	0.255 (0.51)	6.3%	1.472 (5.29)	4.1%	−0.049 (0.13)
No spouse present	7.0%	0.210 (0.83)	5.4%	1.238 (3.60)	6.5%	−0.352 (1.01)	5.8%	0.135 (0.48)
Spouse self-employed	24.7%	−0.214 (1.30)	44.6%	−0.239 (1.03)	36.1%	−0.152 (0.88)	25.6%	−0.216 (1.37)
Children under age 6 in household	7.3%	0.293 (1.20)	3.9%	0.279 (0.63)	11.1%	0.824 (3.58)	13.7%	0.852 (4.32)
Constant	24.8%	0.036 (0.22)	19.7%	0.069 (0.25)	20.1%	0.504 (2.81)	37.9%	0.263 (1.72)
		−2.506 (12.08)		−1.599 (5.99)		−2.663 (11.92)		−1.702 (8.56)
<i>N</i> (Person-Years)		19 260		2 303		21 804		7 603
Self-employment Shifts		366		221		268		468
W&S Employer Shifts		2 315		887		2 830		1 984
Wald chi-sq (SE vs. W&S)		38.2		28.4		71.0		33.9
df		10		10		10		10

Credentials structure the self-employment pathway only among employed women in the United States, and even so only women with advanced degrees have significantly greater odds of becoming self-employed than do women with a high school degree. Family factors are important for women as well as for men, but among women it is not parental self-employment but husband's self-employment that structures self-employment transitions. Spousal self-employment more than doubled the relative transition rate into self-employment for women, whether at work or not employed. Moreover, in contrast with men, women were more likely to shift into self-employment if there was a young child in the home.

Among both men and women in the United States, family self-employment is more important than career credentials in structuring self-employment. Moreover, family self-

employment has a bigger impact on the transition process into the workforce than on mobility within the workforce, while career credentials have a greater impact on self-employment transitions for those who already have a job.

The results for Germany in Table 2 show some cross-national differences in the effect of career credentials on self-employment entry. First, the impact of career credentials on men's transition rates is more linear among men in Germany than among men in the United States, and it structures the transition for both jobholders and new entrants. Employed men without vocational qualifications were significantly less likely to move into self-employment than men who had completed an apprenticeship, while among new entrants the relative risk of self-employment was highest among men who held a university degree. Second, men and women in Germany show strong differ-

Table 2

**Discrete Time Event History Coefficients for Contrast between Transitions into Self-Employment versus Transitions to New Wage and Salary Employer Germany, Men and Women 1984–1997 (z-Statistics in parentheses)**

	Men				Women			
	At Work Mean	Coeff	Not at Work Mean	Coeff	At Work Mean	Coeff	Not at Work Mean	Coeff
Tenure/Duration	9.66	0.067 (2.22)	1.55	0.068 (0.42)	6.15	-0.050 (0.57)	2.61	-0.048 (1.01)
Age (Years-25)	14.74	-0.010 (0.50)	14.45	0.018 (0.86)	14.10	-0.030 (2.18)	12.48	0.036 (3.08)
<b>Schooling/Training</b> (omitted: <i>Lehre</i> )	45.7%		46.9%		44.8%		45.4%	
No qualifications/ trained outside Germany	13.9%	-0.919 (2.23)	30.7%	0.263 (0.49)	22.8%	0.895 (1.29)	27.0%	0.217 (0.94)
Higher vocational qualifications	30.7%	0.037 (0.12)	17.9%	0.482 (0.93)	25.2%	0.288 (0.67)	24.0%	0.257 (0.97)
University degree	9.8%	-0.154 (0.34)	4.6%	2.264 (3.01)	7.2%	-2.301 (2.10)	3.7%	0.113 (0.27)
Father self-employed	5.5%	0.180 (0.35)	6.3%	1.004 (2.09)	9.2%	-0.473 (0.83)	7.3%	0.237 (0.78)
No spouse present	24.2%	0.413 (1.13)	46.3%	-0.144 (0.36)	32.5%	-0.441 (0.77)	14.0%	-0.512 (1.77)
Spouse self-employed	4.1%	0.775 (1.20)	2.5%	1.484 (2.25)	5.2%	1.215 (1.98)	8.8%	1.537 (6.52)
Children under age 6 In household	19.1%	0.421 (1.24)	15.7%	1.189 (2.47)	12.6%	0.095 (0.18)	32.4%	0.442 (2.03)
Constant		-2.421 (5.57)		-3.034 (7.13)		-1.989 (4.00)		-2.294 (10.39)
<i>N</i> (Person-Years)	23 031		1 576		15 376		6 755	
Self-employment Shifts	139		72		71		280	
W&S Employer Shifts	1 063		551		819		1 376	
Wald chi-sq (SE vs. W&S)	15.3		32.6		27.0		78.9	
df	9		9		9		9	

ences in the impact of credentials on self-employment transitions: women with the highest credentials had the lowest relative risk of self-employment.

Family pathways into self-employment in the two countries are strikingly similar. In Germany, as in the United States, intergenerational transmission represents an important pathway into self-employment among men, and not among women, and the effect of parental self-employment is significant only for men who are moving into the workplace from non-employment. Among women in Germany, spousal self-employment is the most important pathway into self-employment, just as it is in the United States, increasing the relative risk of self-employment for both jobholders and new entrants into the workforce. Domestic responsibilities also provide a pathway into self-employment: among German women moving into the workforce, the probability of taking a job in self-employment was highest for those women with young children in the household. The only major cross-national difference

in family pathways into self-employment is that men in Germany were surprisingly more sensitive to nuclear family factors than men in the United States: new jobholders in Germany were significantly more likely to become self-employed if married to a self-employed wife and/or if there were young children in the home.

Do career credentials and family self-employment have consequences for the stability of self-employment? The stability analyses in Table 3 show that the exit rate from self-employment is much more strongly dependent on credentials in the United States than in Germany. In the United States (columns 1 and 2), exit rates from self-employment are highest among men and women with less than a high school education, and self-employment is progressively more stable for those with higher academic credentials (although vocational credentials alone do not significantly lower the risk of exit for high school graduates). The exit rates in Germany (columns 3 and 4) are much lower than those in the United States and show little de-



Table 3

**Discrete Time Event History Coefficients for Self-Employment Exits,  
United States and Germany, 1985–1997 (z-Statistics in parentheses)**

	US			Germany	
	Men	Women		Men	Women
Tenure/Duration	−0.190 (5.73)	−0.248 (7.84)	Tenure/Duration	−0.266 (2.08)	−0.156 (3.10)
Age	−0.008 (0.84)	−0.007 (0.93)	Age	−0.040 (1.58)	0.026 (1.68)
Credentials, US (omitted: high school)			Credentials, Germany (omitted: <i>Lehre</i> )		
Less than high school	0.469 (2.18)	0.367 (1.91)	No qualifications or trained outside Germany	−0.514 (0.72)	−0.066 (0.24)
Some college or high school + vocational certificate	−0.171 (0.89)	−0.210 (1.45)	Higher vocational qualifications	−0.557 (1.31)	−0.252 (0.97)
College degree	−0.495 (2.25)	−0.478 (2.70)	University degree	−0.189 (0.31)	0.241 (0.60)
Advanced degree	−0.934 (3.11)	−0.591 (2.53)	Credential fit	−0.312 (0.54)	−1.152 (3.89)
Parent self-employed	0.011 (0.04)	−0.197 (0.86)	Father self-employed	−1.242 (1.96)	0.178 (0.46)
No spouse present	0.535 (3.23)	−0.229 (1.66)	No spouse present	0.346 (0.97)	−0.212 (0.67)
Spouse self-employed	−0.280 (1.16)	−0.415 (3.05)	Spouse self-employed	−0.180 (0.36)	−0.090 (0.37)
Children under age 6	0.096 (0.57)	0.133 (0.96)	Children under 6	−0.167 (0.40)	0.238 (1.11)
Constant	−1.317 (6.32)	−0.190 (1.11)	Constant	−1.068 (2.19)	−1.288 (4.11)
<i>N</i> (Person-Years)	2846	2364	<i>N</i> (Person-Years)	934	1154
Number of Exit Events	459	652	Number of Exit Events	79	217
Wald chi-sq	103.3	121.5	Wald Chi-Sq	19.4	38.0
df	10	10	df	10	10

marcation by career credentials. Working at a job that fits one's vocational training does stabilize self-employment among women, reducing the odds of exit by a factor of roughly one-third, but credential fit has no significant effect on men's self-employment stability. The absence of strong relationships between career credentials and exit rates in Germany may be an artifact of the more structured pathway into self-employment: in the more stable labor markets of Germany, resource stratification at entry appears to minimize resource stratification at exit, especially among men.

Family factors contribute to the stability of self-employment in ways that vary by gender and country. Self-employed German men are significantly less likely to exit if their fathers were also self-employed, but parental self-employment has no impact on self-employment duration in the United States. Instead, United States men and women depend more heavily on the nuclear family for self-employment stability. Marriage stabilizes men's self-employment

in the United States, but spousal self-employment does not, while marriage stabilizes United States women's self-employment only if their husbands are also self-employed.

## 6. Summary and Discussion

The results provide some support for the persistence of traditional pathways and the emergence of new pathways into self-employment. The traditional pathway into self-employment via intergenerational transmission persists in both countries as a gendered pathway that structures self-employment for men — but not women — as they move into the labor market. Parental self-employment has a more durable effect in Germany, however, since it not only facilitates self-employment entry but also reduces the rate of exit.

As expected, career credentials acted as a “gatekeeper” into self-employment for men in Germany. The lack

of credentials earned in the German vocational training system proved to be the strongest deterrent to men's entry into self-employment, but once they became self-employed, their qualifications had no significant impact on their duration in self-employment stability. Career credentials in the United States stratified self-employment entry, as well, but this stratification was curvilinear, so men who lacked even a high school degree entered self-employment at the same rate as men with a four-year degree from college. The failure of education and training credentials to serve as "gatekeepers" into self-employment in the United States may account for the much stronger relationship between academic qualifications and exit rates in the United States. Exit rates for both men and women in the United States declined as credentials increased.

Self-employed women have not, for the most part, adopted the traditional route of following their parents into

self-employment. Instead, the dominant pathway into self-employment for women in both countries is spousal transmission. Likewise, domestic responsibilities structured women's entry into self-employment in both countries. Women with young children were significantly more likely to move into self-employment in both countries, but the impact of children was especially strong for employed women in the United States.

Overall, the findings point to more similarities than differences in the pathways into self-employment in the United States and Germany, with prominent gender differences and the persistence of traditional (and gendered) pathways into self-employment. Future research should identify whether these gender differences can be explained by specific mechanisms that govern different forms of self-employment, as well as the relationship between the pathway into self-employment and outcomes such as earnings and income.

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