

**CHANGE AT HOME, IN THE LABOR
MARKET, AND ON THE JOB**

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CHANGE AT HOME, IN THE LABOR MARKET, AND ON THE JOB

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PREFACE

Research in Labor Economics is a series that publishes new labor economics research. Articles apply economic theory and econometrics to policy-relevant topics often with an international focal point. This volume contains eight articles. Seven deal with demographic and labor market change, and one deals with wage differences essentially at a point in time. Of the seven, two analyze changes in family-related matters and have implications regarding labor supply; two examine legislative changes, one of which has implications on teenage employment, and the other on informal business formation; one looks at potential productivity changes on farms in a developing country and has implications for remaining on the family farm or going to work; one models wage growth and shows why wages sometimes fall as one remains in a job longer; and finally one investigates new enterprise formation over time. As you will see, published articles in *Research in Labor Economics* focus on important issues and maintain the highest levels of scholarship. They are indexed in EconLit, Google Scholar, RePEc, and SCOPUS. Readers who have prepared manuscripts that meet these stringent standards are encouraged to submit them via the IZA website (<http://rle.iza.org>).

Perhaps the biggest change in the labor market over the last 150 years is the continual increase in women's labor force participation. In part, this change is demographically based. Fertility rates declined, women's years of school increased, and of late, cohabitation rates grew, and the age of first marriage rose. Related to these trends is the division of labor in the home, and hence husbands' and wives' characteristics: who marries whom, and why. It is now somewhat known husbands and wives are getting closer in age implying a diminished marital age gap (See RLE, Volume 41). However, in the first article Rania Gihleb and Kevin Lang note economists and sociologists have mixed messages regarding educational trends. Economists have argued in favor of assortative mating whereas sociologists in favor of homogamy, but according to Gihleb and Lang the two are different, and it is not clear that either is prevalent in the data. Thus they distinguish between the two concepts. According to them, positive assortative mating refers to a situation in which the average education of one spouse is increasing in the education of the other. Homogamy instead refers to a situation in which likes marry likes, that is, those with the same level of education marry each other so that, for example, college students marry college students, and high school students marry high school students. Based on these definitions they utilize the Current Population Surveys and the decennial census along with the American Community Survey to examine changes in marital sorting and homogamy by education. They conclude that there is no compelling evidence of an increase.

Indeed, when they separate college graduates from those with a more advanced degree, homogamy appears to have declined. Similarly, over the last 50 years, they find no evidence that assortative mating changed substantially.

One impetus for change in the family dynamic and subsequent labor supply, say from one cohort to another, might occur when labor market institutions are altered early in a new cohort's career. In the next article Judith Liu examines change in the medical profession. Doctors are mostly male and are known to work long hours. In 1950, 6% of physicians were women. In 1970 this increased to 23%, and then to 36% in 2015. Concomitantly hours worked declined. To become a physician in the US, one must complete 3–7 years of residency training after college and medical school, and then obtain a medical license to practice medicine. In the early days, residency requirements did not explicitly reference resident hours. Instead, documents dictating residency requirements concentrated on the learning environment and required intense training often entailing long hours and periodic 24-hour shifts. In 2003 the Accreditation Council for Graduate Medical Education (ACGME) implemented a dramatic reduction in residency hours. This entailed a maximum of 80 hours worked per week, averaged over a month, a 24-hour limit on continuous duty, 1 day per week free of all medically related duties, and a 10-hour rest period between duty periods or work shifts. Liu uses monthly data from the 1989–2017 Current Population Surveys to identify the effects of a reduction in early career hours, due to the change in work-hour regulations, on long-term physician labor supply. She employs a difference-in-differences model with cohort and year fixed effects as well as a changes-in-changes (CIC) approach. She finds, as a result of the reform, the mean resident hours per week decrease by 10.03 for males and 6.87 for females. Further, these negative effects are stronger when moving toward the upper tail of the distribution for both male and female physicians, thus yielding a greater impact among those with the longest hours. For women, increases in the probability of marriage and increases in the number of children are the family dynamic mechanisms by which these labor supply changes occurred.

As countries develop the proportion of the economy devoted to agriculture falls. In 1900, 41% of the US workforce was employed in agriculture. In 2012 the proportion in agriculture dwindled to 1.5%. Yet today, the percent is still significant in many developing countries, for example, 72.7% in Ethiopia. Many farms in developing countries are family-run. Yet increasingly, in these countries, who remains in agriculture and who gets a job for pay outside the family farm is an important question. It is especially significant for women and youth. Whether one leaves the family farm is related to one's potential wage, as well as one's value at home on the family farm, namely one's opportunity costs. As such, leaving the family farm should be related to one's productivity on the farm. The higher the productivity the less likely a family member will leave, and the lower the productivity the greater the likelihood. In the next article Tekalign Gutu Sakketa and Nicolas Gerber employ a sample of about 500 households spanning two time periods in a select number of Ethiopian districts to determine who among Ethiopian 13–34-year-old men and women leave the family farm to join the formal labor market. Their innovation is to incorporate male and female

“shadow” wages along with family income both estimated from a household farm production function. They obtain labor supply equations containing gender and age cross-elasticity parameters. The paper finds an upward sloping labor supply function for males, a backward bending labor supply function for females, and significant cross-substitution effects.

Changes in a country’s policy have real effects, sometimes immediate, sometimes not so immediate. The impact of the minimum wage has been extensively studied in many countries, but not in Japan. The handful of studies there mostly use aggregate employment data and find negative employment effects for young workers, but virtually no studies utilize employment and work hours data based on an establishment survey. The next article by Masao Yamaguchi is an exception. Based on annual 2008–2010 Japanese minimum wage changes that vary by prefecture, he identifies minimum wage effects on employment, average hourly wages, work hours, full-time equivalent employment (FTE), total wage costs, average tenure, separations and new hiring at the establishment level. He utilizes panel data gleaned from the Basic Survey on Wage Structure (BSWS) which covers the whole of Japan and thus does not focus on narrow geographic locations as did analyses in many other countries. Identification is established by minimum wage variations across establishments in 47 prefectures from 2008 to 2010. Further, he focuses on accommodation, eating and drinking services, and food takeout and delivery services, the sectors typically employing workers at the minimum wage. The paper finds a positive but statistically insignificant effect on employment and significant increases in wage costs for establishments, which may be caused by the larger decrease in the separation than in the new hiring of part-time workers.

One problem with many policy evaluation studies is their failure to distinguish long-term from short-term effects. One innovation in the next article is to distinguish between short-term from long-term changes. It examines theoretically and empirically the impact of tax reform on relative employment in the informal (compared to the formal) sector of the Colombian labor market. In Colombia, high payroll taxes lead to informality. However, in 2012 Colombia significantly reduced payroll taxes, thereby decreasing the employers’ relative cost of hiring formal workers. In the next article, Pablo Adrian Garlati-Bertoldi evaluates this reform’s impact on informal employees, both theoretically and empirically. He utilizes a difference-in-differences (DID) approach using two data sets. The first is composed of many repeated cross-sections covering years 2008–2016. The second is a panel dataset that covers the years 2010, 2013, and 2016. However, because of alternative changes that occurred at the same time as the treatment of interest, Garlati-Bertoldi utilizes his DID estimates to calibrate a static general equilibrium model. The model is then used to study potential combinations of enforcement and taxes. The results show that the reform is associated with reductions in informality with small short-term effects and large long-term effects.

It is well known that wages increase over one’s working life. But this wage premium means older workers earn more than younger ones. Whereas the human capital, as well as deferred compensation models, explain this phenomenon, it is

also possible that younger workers feel discriminated against because of their wage deficiency. At least in Italy, this is the case. However, disentangling discrimination from other explanations is difficult. In the next article, Carolina Castagnetti, Luisa Rosti, and Marina Töpfer apply a machine-learning approach using a least absolute shrinkage operator (LASSO) estimator and control for sample selection to decompose estimates of the conditional average pay gap between 18–34- and 35–64-year-old individuals using 2005–2016 Italian Institute for Development of Vocational Training of Workers data. The raw data indicate that young male employees earn on average 24% less than older ones, whereas young women earn 17% less. However, the average pay gap is reduced to 2% when using their approach. As such, Castagnetti et al. conclude age discrimination in pay is only perceived but not actual in Italy either for men or women.

Whereas wages rise over the life cycle, within a job the earnings-tenure gradient is sometimes flat or even decreasing. One reason is promotion. The very able highly productive workers simply advance to a new job, and those remaining are of poorer quality. As such, a number of studies argue promotion to be critical to wage growth. However, none focus on wage growth of the non-promoted. In the next article, Xin Jin devises a human capital model whereby asymmetric learning results in a rising then falling wage when a worker fails to be promoted. Initially wages rise as the worker acquires human capital but the negative signal from nonpromotion leads to a decline. Jin tests the model's predictions using the personnel records from a large US firm from 1970 to 1988. He finds a hump-shaped wage-job-tenure profile for workers who stay at the same job level thus supporting his model's contention.

Conceptually it is hard to distinguish working for oneself and working for someone else. Both constitute work. Both have to do with making money and getting paid, but both are intrinsically different. Working for oneself defines entrepreneurship, taking on risk and responsibility, potentially building a business. Working for someone else defines employment, taking on less risk, but potentially moving up the occupational ladder. One can move from employment to entrepreneurship, but there are a number of unanswered questions about this phenomenon, most notably who starts a business, and when. For example, current studies show positive, negative, and zero relationships between unemployment and entrepreneurship. Whereas the literature defines two types of entrepreneurship: opportunity and necessity, currently they are not defined well enough to yield convincing empirical evidence. In the final article, Robert W. Fairlie and Frank M. Fossen propose sufficiently viable definitions of opportunity and necessity entrepreneurship to enable them to validate their definitions by exploring their consistency empirically. Individuals who are initially unemployed before starting businesses are defined as “necessity” entrepreneurs, and individuals who are wage/salary workers, enrolled in school or college, or are not actively seeking a job are defined as “opportunity” entrepreneurs. Necessity entrepreneurship is countercyclical, whereas opportunity entrepreneurship is procyclical. Fairlie and Fossen measure necessity and opportunity entrepreneurship by utilizing large, nationally representative, widely used data for the United States and Germany. Using these definitions, they find that roughly 80%

of entrepreneurship is of the opportunity versus necessity variety in the United States, and roughly 90% in Germany. In the process, they find that opportunity versus necessity entrepreneurship is positively associated with the creation of more growth-oriented businesses.

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