

Transition systems and non-standard employment in early career: comparing Japan and Switzerland

Christian Imdorf^a , Laura Alexandra Helbling^b and Akio Inui^c

^aInstitute of Sociology, University of Bern, Bern, Switzerland; ^bDepartment of Social Sciences, University of Basel, Basel, Switzerland; ^cSchool of Social Sciences and Humanities, Tokyo Metropolitan University, Tokyo, Japan

ABSTRACT

Even though Japan and Switzerland are characterised by comparatively low youth unemployment rates, non-standard forms of employment are on the rise, posing a risk to the stable integration of young labour market entrants. Drawing on the French approach of societal analysis, this paper investigates how country-specific school-to-work transition systems stratify the risk of non-standard employment in early career differently in Japan and Switzerland. Our results reveal that in Japan, young entrants who completed university education are least at risk of becoming employed in non-standard work. On the contrary, it is the highly educated university graduates who mainly enter the labour market via non-standard employment in Switzerland, where vocational education promotes smooth transitions into standard employment relationships. Our findings suggest that the transition systems of the two countries differ in the way they revert to non-standard forms of employment. However, while job insecurities may not endanger labour market integration of highly skilled university graduates holding good career prospects in Switzerland, they may go hand in hand with social exclusion processes for the low-educated young entrants lacking bargaining power in the segmented Japanese labour market.

ARTICLE HISTORY

Received 6 May 2016

Accepted 7 September 2016

KEYWORDS

Transition system; non-standard employment; early career; Japan; Switzerland

Introduction

This paper investigates how educational trajectories stratify the risk of non-standard employment for youth at labour market entry in Japan and Switzerland, two countries with distinctive education-to-work transition systems. Even though both countries have relatively low youth unemployment rates of 7–9%, school graduates face increasingly risky labour markets. In addition to increases in (youth) unemployment (Weber 2001; Genda 2003; Sacchi and Salvisberg 2011; Goodman 2012; Bolli et al. 2015), jobs deviating from the traditional ‘male breadwinner model’ (Meier 2014) of continuous, full-time employment have become an integral part of both economies (Inui 2009; Ecoplan 2010; OECD 2010, 2014; Yu 2012; Toivonen and Imoto 2012, 4).

With reference to the pioneering French approach of societal analysis (Maurice, Sellier, and Silvestre 1979; Maurice 2008) – which provided the basis for further education and transition system research (see, e.g. Allmendinger 1989; Müller and Shavit 1998) and which fed into the concept of transition systems (Raffe 2008) – a coherent intertwining of education and employment structures, which leads to smooth school-to-work transitions, needs to be viewed differently for Switzerland, which represents

CONTACT Christian Imdorf  christian.imdorf@soz.unibe.ch

© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

an Occupational Labour Market (OLM, or a 'qualification space') and Japan, where the Internal Labour Market (ILM, 'organisational space' [Müller and Shavit 1998]) is more prominent. While the Swiss transition system relies on the vocational principle as the main link between education and work, the Japanese transition system has traditionally relied much more on companies that integrate academically prepared school graduates and train them on the job. Whereas the transition system literature has intensely analysed the different mix and functionality of vocational and general education in ILM and OLM, the impact of transition systems on non-standard employment has only very recently been problematised (Busemeyer and Thelen 2015).

To help close this research gap, the aim of this paper is to gain an initial understanding and encourage further thinking about how different education-to-work transition systems may relate to recent labour market insecurities surrounding the establishment of newcomers. More specifically, we ask how non-standard employment relates to vocational vs. university education in the different transition systems of Switzerland and Japan. We use comparable youth panel data in our analysis in order to compare early labour market destinations of young school graduates. Our findings point to remarkably different patterns of non-standard employment among vocational and university graduates in the two countries. These findings are interpreted against the background of different transition systems, suggesting differential operational logics of non-standard forms of entry-employment.

Investigating the stratifying impact of educational pathways on the risk of non-standard entry employment during one's early career in Japan and Switzerland, we briefly define non-standard employment and outline, in a first step, competing perspectives on the operational logics and consequences of non-standard entry work for youth as either 'stepping-stones' or 'dead-ends'. In a second step, we embed the operational logics of non-standard entry employment in the context of differential transition systems that structure the allocation of school graduates to their first jobs. Following this, the method and data used are introduced. Finally, the results are presented, followed by a discussion and conclusion.

Non-standard employment and school-to-work transition systems

Different functions and consequences of non-standard employment

In the context of economic slowdown, globalisation, tertiarisation and technological progress, standards such as the traditional 'male breadwinner model' (Meier 2014), established throughout the post-war period in advanced economies, have come under increased pressure. Demand for more flexible forms of work, departing from the formerly established standard of continuous, full-time, and dependent employment, has increased. Formerly well-established workers are nowadays facing 'new' insecurities concerning their labour market and social security system integration across advanced economies.

Overall, different definitions of standard employment exist. Most definitions are based on aspects such as dependent employment, the contractual status (permanent) and regular working hours (full-time), which are in accordance with the definition applied in this study. *Non-standard employment* (also referred to as atypical work) is defined negatively against the standard employment relationship. Thus non-standard employment includes a heterogeneous conglomerate of different forms of work that deviate in one or several respects from standard employment, including part-time work, fixed-term employment, temporary agency work, or work on call (Ecoplan 2007; Meier 2014; ILO 2015).

Despite increased educational attainment, labour market entrants in particular are encountering increasing difficulties in finding stable employment across the OECD countries. In addition to increased unemployment risks, youth are disproportionately affected by non-standard forms of work, such as fixed-term work, part-time employment and temporary agency work (ILO 2012; Eurofound 2013; OECD 2014). This extends to labour markets that are otherwise characterised by low youth unemployment rates in international comparison, such as those in Switzerland or Japan (Ecoplan 2007; Inui, Masahiko, and Hiratsuka 2007; Standing 2011). As non-standard forms of employment have been found to be inferior compared to standard employment in terms of job security, wage level, promotion aspects, and occupational upward mobility, as well as continuing training possibilities (Booth, Francesconi, and Frank 2002; Giesecke and Groß 2003, 2004; Inui 2009; Yu 2012; OECD 2014, 2010), and they may prove

to be traps evolving into unstable careers, concern has been raised about the increasingly risky and volatile labour market integration of youth in advanced economies.

What complicates a uniform association of non-standard employment with job and employment insecurities (Chung 2015) is that similar types of non-standard forms of employment may serve different purposes from the employer's perspective (Giesecke and Groß 2006), resulting in differential consequences for the careers of those engaged. On the one hand, non-standard employment may be utilised by employers as a screening device allowing for access into high-skill work with good career prospects after an initial probationary period. In this case, non-standard forms of work may function as *stepping-stones* into regular work and thus ease the school-to-work transitions for youth who get a chance to gain work experience and prove themselves on the job. On the other hand, non-standard employment may be utilised by employers as a numerical flexibilisation strategy (Atkinson 1984), allowing for the employment of a buffer stock of workers, which can be more easily adjusted to changes in demand. This clearly undermines the job security for those employed in such (more peripheral) work arrangements. From this perspective, atypical employment needs to be viewed as *a trap*, hindering stable labour market integration and professional development of youth who bounce back and forth between insecure work and unemployment (see, e.g. Scherer 2004; OECD 2014, 179 ff.).

School-to-work transition systems and non-standard employment

Rather than considering these two different perspectives on the operational logics and linked consequences of non-standard employment on the labour market integration of youth as competing, we argue that they need be assessed in the light of country-specific systems of school-to-work transitions. In short, such transition systems may be described as the relatively enduring features of a country's institutional and structural arrangements, which shape the transition from education to early employment (Raffe 2008).

The societal analysis approach (Maurice, Sellier, and Silvestre 1979; Maurice 2008) – distinguishing between 'qualification space' (OLM) and 'organisational space' (ILM) – has strongly influenced international transition systems research (Raffe 2008). It proposes country-specific relationships between the organisation of education (general vs. vocational education, type of degrees offered, the nature of competition, tracking and selection, etc.), on the one hand, and the labour market structures and processes (job hierarchy with regard to training and qualification, variation between the branches of industry, behaviour of firms etc.), on the other hand. Hence, different ratios of general and vocational education on the upper-secondary and tertiary levels have to be understood in a wider context of how the educational system and the employment system (the standard model of employment, its various categories of qualification and forms of employment, and occupational mobility) consistently relate to each other. Along this vein, different operational logics of non-standard forms of work in the early career period and the educational profiles of the affected youth may be thought to relate to country-specific logics in allocating school graduates to jobs.

Thus far, only a few studies have looked at how patterns of non-standard employment might be linked to country-specific systems of education and employment. Nohara (2000) analysed the different functions of part-time work for women in France and Japan as a function of the respective employment systems. Busemeyer and Thelen (2015), with a special focus on initial vocational education and training (IVET) systems, demonstrated that skill formation regimes matter with regard to youth unemployment and low-pay employment. The authors distinguished four different skill formation systems – statist, collectivist, liberal, and segmentalist – by taking into consideration the degree of public commitment to vocational training and the involvement of firms in IVET (Thelen 2004; Busemeyer 2009). In liberal skill formation regimes (e.g. the United Kingdom), both public commitment to and firm involvement in IVET are low, and the education system promotes academic skills. Whereas the involvement of employers is similarly limited in statist skill formation regimes (e.g. France, Denmark), the latter show higher public commitment to IVET. Within systems with a high firm involvement, collectivist systems (e.g. Germany and Switzerland), where a wider range of firms, including small and medium-sized enterprises, typically train

'above need', can be distinguished from segmentalist systems (e.g. Japan), where on-the-job-training is primarily offered by firms for their own recruitment and retention purposes. Busemeyer and Thelen. (2015) found that even though firm-based IVET in collectivist systems is more effective in reducing youth unemployment, school based IVET of statist systems seems to be more effective in mitigating labour market stratification through wage inequality. Liberal skill formation regimes, in turn, perform better than average with regard to the inclusion of young people in the labour market, but they seem to produce a higher risk of low pay. In the following, we ask how collectivist and segmentalist systems may differ with respect to relegating youth to non-standard employment by analysing the cases of Switzerland and Japan.

Contrasting school-to-work transition systems in Switzerland and Japan

While young people's school-to-work transitions in Switzerland and Japan show some similarities, they occur within different transition systems. In Switzerland, IVET is the most popular form of upper-secondary level education and training. Mainly organised in the form of apprenticeships, upper-secondary IVET programmes provide over two-thirds of young people with the knowledge and skills needed to carry out and qualify for a specific occupation (SERI 2013). In contrast, Japan's upper-secondary graduation rate figures for 2011 are opposite those of Switzerland, with three out of four first-time upper secondary graduates having enrolled in general programmes and only one out of four in (pre-) vocational programmes (OECD 2013, 51). Accordingly, first-degree tertiary enrolment is considerably higher in Japan compared to Switzerland. While Japan has a tertiary graduation rate of 69%, the respective figure for Switzerland amounts to 47%.¹

The coherence of education and employment in 'collectivist' Switzerland

The traditional coherence of the education and employment systems in Switzerland is similar to that of Germany. In both countries, the way employees acquire labour market qualifications is centred on the concept of *Beruf* (professionalism or vocation), which has several dimensions: a formal knowledge base, mastery of practical skills, membership in an association, and formal recognition of IVET qualifications within the labour market. The Swiss apprenticeship system is highly valued by the public and has a strong corporatist trait. The regulation of IVET is based on a complex collaboration between the state, industrial and professional associations (e.g. local chambers of industry and commerce, or handicraft guilds), and trade unions. The adjustment of supply and demand is made through joint initiatives of the industry and the IVET system. The IVET system leads to recognised qualifications (Federal VET Diploma) that closely match the needs of an occupationally segmented labour market, both in terms of occupational skills and the number of jobs that are available. As a consequence, access to qualified employment is highly regulated by recognised occupational certificates within specific industries. Therefore, Switzerland represents a collectivist skill formation regime embedded in a liberal, but occupationally segmented, labour market ('qualification space').

In turn, higher education programmes, especially academic university programmes, are less occupationally specific and nationally standardised (Blossfeld and Skopek 2015), which may result in job-education mismatches at labour market entry (Diem and Wolter 2014). Furthermore, universities often conform their offer of study programmes to the students' demands rather than to labour market needs. As university graduates (long higher education) cannot rely on strong institutional links between education and work in the collectivist transition system of Switzerland – since allocation to jobs follows an employment logic (Iannelli and Raffe 2007) – we expect university graduates to be more often affected by non-standard employment at labour market entry compared to IVET graduates who have already proven themselves 'on-the job', but also compared to graduates of short higher education programmes. In contrast to longer (academic) higher education, the latter (e.g. studies at universities of applied sciences or at PET colleges) require a vocational baccalaureate or respective work experience and are therefore more closely linked to labour market needs.

The coherence of education and employment in 'segmentalist' Japan

In Japan, post-World War II, the central actors in the development of workers' job skills have not been schools or the state, but rather the employers of private enterprises (Thelen 2004; Brinton 2011). Training has been provided without state regulation in mostly large and medium-sized companies (Goodman 2012). According to their own needs and demand, companies de facto took over vocational education to develop the skills of high school graduates who were supposed to learn on the job (Inui 2003; Maurice 2008). Accordingly, public vocational education and training prior to employment was hardly developed and its lack has remained a distinctive characteristic of the Japanese education system (Inui 1993). Based on the production of company-specific skills in the primary segment of the labour market, the Japanese transition system is referred to as a segmentalist system (Thelen 2004). The (occupational) distinction between different jobs is of much less importance in this system than is the distinction between internal (primary) and external (secondary) labour market segments (Doeringer and Piore 1971; Inui 1993).

Up until today, the Japanese educational system has only provided some (mostly private) specialised training colleges and courses at vocational high schools in agriculture, fishery, industry, home economics, and commerce, which remain devaluated and aligned according to the needs of external markets (Brinton 2011). Rather than promoting vocational education and training, the system has privileged general education (Inui and Hosogane 1995), which led to widespread higher education (Maurice 2008). The main function of education in Japan has been the development of general human capital based on strong academic competition in accessing senior high schools and higher education (Inui 1993). The competition between students within the whole school system (including vocational education) is therefore almost completely aligned according to academic criteria, the main social and educational streaming criteria for Japanese youths. To the employers, academic credentials signal a general 'potential' and capacity for social and professional adaptation (Maurice 2008) and are given precedence over (job-) specific skills and qualifications at hiring. This is very different than the Swiss collectivist system, where competition for jobs among young adults holding upper-secondary level education is primarily based on well-developed occupation-specific skills. Swiss companies, first of all, look for graduates holding a VET diploma indicating such skills, which are often valued more than are general skills, especially as far as upper-secondary level education is concerned.

From the perspective of societal analysis, Japan's highly examination-centred, intensely competitive education system is linked to the distinct organisation of the Japanese employment system (Maurice 2008). The recruitment of young – especially male – workers was traditionally done through the high school graduate recruitment system, a quasi institution of the employment system for Japanese high school graduates. Conceptually, the graduate recruitment system is part of a lifetime employment model (with permanent full-time employment as one of its central features) that offers social security and includes additional subsystems, such as a training system within the firm, a seniority promotion system and a retirement system (Inui 1993).

In this segmentalist school-to-work transition system, schools, colleges and universities allocate their students directly to employers who sign informal job contracts with fresh graduates months before their graduation, based on academic criteria (Toivonen and Imoto 2012). Schools traditionally recommend a selection of their best students to some companies that they have been in contact with for several years. The more academically successful the high school and university graduates, the better the chance to get hired by a company in the Japanese employment system, which offers stable forms of employment in the ILM. As Goodman (2012, 164) stated, 'top employers drew their new workers from the top universities, which in turn took their students from the top secondary schools, which admitted their students on the basis of how well they had done on entrance examinations at the age of 15'. The Japanese graduate recruitment system covered nearly 80% of each cohort from the middle of the 1960s to the end of the 1970s, and the figure was still nearly 70% in the 1980s (Inui 2003).

One should note, however, that the segmentalist Japanese transition system has experienced increasing imbalance and disintegration in a changing, globalising labour market, with considerable expansion

of the external labour market for young workers since the late 1980s. Temporary, part-time, and casual work (individuals that fall into this category are called 'freeters') has become more frequent among young people, and the share of insecure 'non-standard' workers in terms of the total employment pool increased from approximately 20 to 46% for 15–24 year olds between 1990 and 2009 (Inui 2009; Toivonen and Imoto 2012). In light of the persisting segmentalist Japanese transition system, where it is (at best) the academically educated youth that benefit from an institutionalised pathway to stable jobs, one can therefore expect a higher risk of non-standard employment the lower the academic achievement of young Japanese adults.

Against this backdrop of two differing – segmentalist vs. collectivist – school-to-work transition systems, we empirically investigate how vocational training and academic education promote entry into non-standard employment to different degrees for youth who enter the labour market in Japan and Switzerland.

Data and methods

Data

Our analysis draws upon data from two comparable longitudinal surveys: the Swiss youth panel survey *Transition from Education to Employment* (TREE) and the *Youth Cohort Study of Japan* (YCSJ). TREE surveys the post-compulsory educational and labour market pathways of a school graduates' cohort in Switzerland, based on a sample of approximately 6000 young people who participated in the PISA survey for the year 2000 and left compulsory school the same year, at the age of 15 or 16. This sample was followed up by TREE by means of seven waves in an annual rhythm between 2001 and 2007 and an eighth one in 2010. The Swiss findings are based on the eighth survey wave in 2010, when the respondents were about 26 years old. At that time, 54% ($N = 3424$) of the 2001 sample were still covered by the survey (TREE 2013). Panel weights were used to compensate for sample bias and to maintain the representative nature of the sample (Sacchi 2011).

A research project group from the Japanese Educational Research Association conducted the YCSJ panel study, which was funded by the government's academic research fund. All of the respondents were 20 years of age in April 2007 and were selected randomly from the national register of residents. The first wave of data collection occurred in autumn 2007, with subsequent annual waves until 2011 (five survey waves). The response rate for the first survey wave was 40.2%, leading to 1687 completed questionnaires. Although the response rate was not high, the analysis of respondents' main activities (education, employment and other) and employment status (regular, fixed-term and 'freeter') closely matched the recorded rates of the population at that age in official statistics (Furlong et al. 2012). The Japanese findings are based on the fifth survey wave in 2011, when the respondents were 24 years old.

The focus of our analysis is on young adults employed in the labour market² who are not still in education or training programmes and of whom we have information on their highest level of educational attainment. This amounts to a sample of $N = 1979$ young workers in Switzerland, of which 1122 are female and 857 are male. For Japan, the final sample consists of $N = 687$ young employees, of whom 384 are female and 303 are male. In the case of Japan, non-standard employment, our dependent variable, is defined with regard to an individual's main job (self-reported, according to the most hours worked) and captures self-reported part-time work, fixed-term employment, jobs through employment agencies, self-employment, work in family businesses, and artisanry in private households. In the Swiss case, non-standard employment is defined with regard to the main job (which is the job encompassing the most hours worked per week) and includes part-time work (<30 h per week, which is less than 70%), fixed-term employment, self-employment, work on call, work in family businesses and private households. Based on these measurements, we found that 31% of Japanese respondents were employed in non-standard jobs compared to 24% of Swiss respondents (weighted).

Table 1. Educational attainment across countries.

Educational attainment	Switzerland ^a	Japan
General education	8% (213)	10% (67)
Vocational education (IVET)	62% (953)	12% (81)
Short higher education	18% (396)	32% (222)
Long higher education	12% (417)	46% (317)
	100% (1979)	100% (687)

^aTREE data are weighted to correct for sampling design and panel attrition.

Independent variables

The attained type of *education* is categorised into general education, vocational education, short higher education, and long higher education. General education refers to workers with completed general studies at the upper-secondary level (Japan: senior high school level), holding neither a vocational nor a tertiary degree. Vocational education (IVET) refers to the completion of vocational education at the upper-secondary level. Short higher education in Japan encompasses degrees from junior colleges, specialised training colleges, and colleges of technology. In the Swiss case, we compare degrees from universities of applied science, universities of teacher education, and professional colleges. Long higher education refers to four-year university studies in Japan and to academic study programmes at universities in Switzerland.

Table 1 shows the educational attainment across the Swiss and the Japanese samples. In all, 8% of respondents in Switzerland and 10% in Japan completed upper-secondary general education without labour market orientation. The percentage of vocational degrees in Switzerland is five times higher compared to in Japan (62% compared to 12%). Workers with higher education degrees are remarkably overrepresented in Japan, especially with regard to long higher education (46% compared to 12% in the Swiss data).³

In our analysis, we *controlled* for the duration of time that a respondent has been out of school (*duration*), which is measured in months and captures the time span between the date of the survey and the completion of a case's highest educational degree. *Parental higher education* is a dichotomous variable that is coded 1 if at least one parent completed a (short or long) higher educational degree and is coded 0 if no parent graduated from higher education. *Gender* is a binary variable that is coded 0 for female and 1 for male workers. We further included a variable capturing the *firm size*, which is classified as small (headcount: 0–99), medium (headcount: 100–499), and/or large (headcount: 500+). In addition, we included *industrial sectors*, classified as manufacturing, construction, sales, finance and real estate, transportation and electricity, restaurant and hotel, information and communication, education and research, medical and welfare, government, primary and others, and various services. *Region of living* is a dichotomous variable that is coded 1 if the young workers' geographical origin is a rural area and is coded 0 if they lived in an urban area when they enrolled in upper-secondary school.

Method

The comparison of groups in non-linear regression models is complicated, as regression coefficients reflect residual variation, which is likely to vary across models and groups (Long 1997; Mood 2010; Best and Wolf. 2012; Karlson, Holm, and Breen 2012). Thus, when applying a logistic regression analysis in order to model the risk of non-standard employment in Japan and Switzerland, log-odds and odds-ratios cannot be compared across countries. In order to compare the effects of educational attainment on the probability of non-standard employment, we will therefore report average marginal effects (Mood 2010; Best and Wolf. 2012). This helps to shed some light on the different average effects of educational attainment on young employees' risks of exposure to labour market insecurities within and across countries. To assess whether or not significant differences exist in the way that educational tracks stratify the risk of non-standard employment across countries, we further followed Long's (2009)

recommendations and computed differences in predicted probabilities of non-standard employment at different educational levels. In contrast to log-odds and odds-ratios, predicted probabilities are not confounded by differential residual variation (Long 2009) and can be compared across groups. With respect to the Swiss sample, weights that adjust for disproportionality due to the sampling design of the PISA/TREE survey and panel attrition (Sacchi 2011) were applied in order to allow for a generalisation of the results regarding the target population of young employees in Switzerland.

Results

Our multivariate results reveal significant differences in the effects of educational attainment on the risk of non-standard employment within both countries, even if gender, duration since leaving school, parental educational background, type of industry, firm size, and region of living were controlled (Table 2). Furthermore, our findings suggest that educational tracks differ in their effect on future labour market insecurities across institutional settings. In Switzerland, those who pursued a vocational education or a short higher education are, on average, 22–25% less likely to be exposed to non-standard work compared to those who pursued a long higher education (reference group). In contrast, in Japan, young adults who pursued a short higher, vocational or general educational track are, on average, between 13 and 39% more likely to attain non-standard work when controlling for further covariates that were included in the model. Therefore, while long higher education protects youth from non-standard work in Japan, the reverse seems to be true for Switzerland.

We did not find significant gender differences with regard to non-standard employment in either country. However, we found parental educational background to be significantly positively related to

Table 2. Non-standard employment: average marginal effects (AME).

	Switzerland ^a	<i>N</i> = 1789	Japan	<i>N</i> = 557
Non-standard employment	AME	SE	AME	SE
<i>Education^b</i>				
General education	0.03	0.07	0.39***	0.09
IVET	−0.22***	0.06	0.22*	0.09
Short higher education	−0.25***	0.05	0.13*	0.05
<i>Gender</i>				
Male	0.03	0.03	−0.05	0.04
<i>Time out of school</i>				
Duration (month)	0.001	0.001	−0.002	0.002
<i>Family Background</i>				
Parental higher education	0.07*	0.03	−0.07(*)	0.03
<i>Industry^c</i>				
Construction	0.15(*)	0.09	0.07	0.10
Sales	0.08(*)	0.05	0.16**	0.06
Finance	0.02	0.07	−0.28(*)	0.16
Transport/Electricity	0.18**	0.06	0.15(*)	0.08
Restaurant/Hotel	0.19*	0.09	0.15	0.10
Information/Comm.	0.05	0.07	−0.003	0.09
Education/Research	0.13*	0.06	0.21**	0.07
Medical/Welfare	0.18*	0.07	−0.04	0.07
Government	0.28***	0.08	0.16(*)	0.09
Primary/Others	0.27**	0.09	0.19(*)	0.11
Various services	0.34***	0.09	0.10	0.07
<i>Firm size^d</i>				
Medium [100–499]	0.002	0.04	−0.07(*)	0.04
Large [500+]	0.004	0.05	−0.06	0.04
<i>Region of living</i>				
Urban area	−0.004	0.03	−0.03	0.03

(*) $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

^aWeight (wt8_kal) applied and corrected for the complex survey design of the PISA-TREE data.

^bReference category: long higher education.

^cReference category: manufacturing.

^dReference category: Small firm size [1–99].

non-standard employment in Switzerland. Young workers whose parents are highly educated have, on average, about a 7% higher risk of attaining non-standard work in Switzerland, while again, the reverse situation applies to Japan. In Japan, parental higher education is negatively associated with non-standard employment (weak statistical significance). Our results therefore suggest that while non-standard work seems to be an 'upper class' phenomenon in Switzerland, it is a 'lower class' phenomenon in Japan.

Industries matter considerably. In Switzerland, young workers in the manufacturing (reference group), finance and information/communication sectors show the lowest risks of attaining non-standard work, whereas the risk for those in the transport/electricity, restaurant/hotel, medical/welfare, government, primary/others, and various services sectors is considerably higher. In Japan, the sectors where workers face the highest risk of non-standard work are sales, transport/electricity, education/research, government, and primary/others. In contrast, the finance sector offers a high degree of regular employment, followed by the medical/welfare, information/communication sectors, and the reference sector manufacturing.

Institutional discrepancies

Comparing differences in predicted probabilities of non-standard employment across educational groups and countries reveals distinct patterns regarding the impact of educational tracks on the probability of non-standard employment (Figure 1).

While in Switzerland, the predicted probability of exposure to non-standard work for young employees with long higher education amounts to about 0.43, in Japan the risk of non-standard work for young adults who hold long higher educational credentials is only about 0.19. Yet, the reverse pattern emerges when focusing on young adults who pursued vocational and short higher education. While in Japan, the probability of exposure to non-standard work for young employees with vocational or short higher education is about 0.42 and 0.33, respectively, in Switzerland, these educational groups are least at risk of non-standard work, with an estimated probability of 0.18 and 0.13, respectively. In both countries, the risk of non-standard work is highest for young employees who completed upper-secondary general education without labour market orientation (CH: 0.57; JP: 0.68).

Significance testing of differences in predicted probabilities that compares young adults with similar educational credentials across countries suggests that in Switzerland, young adults that hold higher educational credentials have a significantly higher probability of being exposed to non-standard

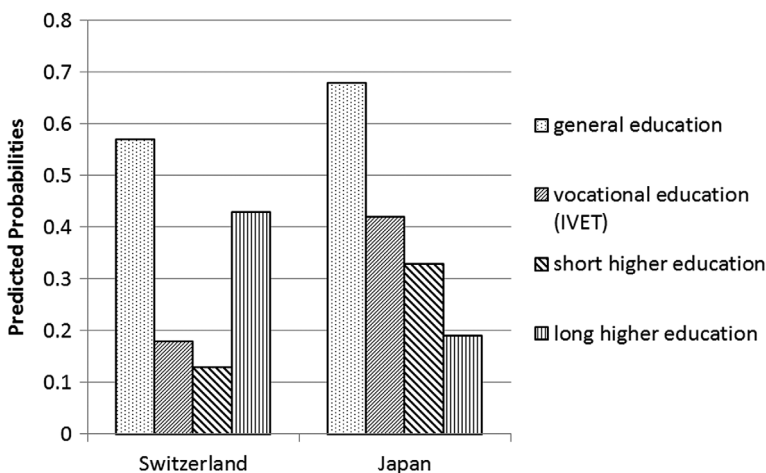


Figure 1. Predicted probabilities comparing Switzerland and Japan.

Note: Probability of non-standard employment for young employees by educational attainment across countries.

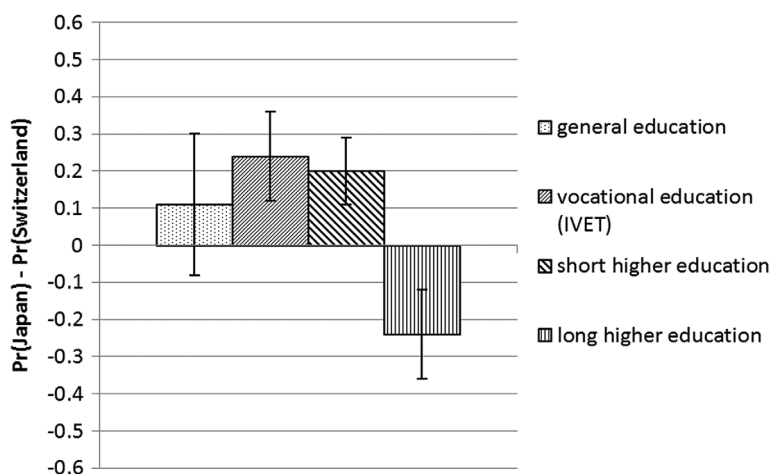


Figure 2. Differences in predicted probabilities.

Note: Differences in the probability of non-standard work by educational attainment, across countries. Tick marks indicate 95% confidence intervals: significant differences in predicted probabilities ($p < 0.05$) at the levels of vocational, short higher and long higher education across countries.

employment compared to young adults with comparable credentials in Japan (Figure 2). In contrast, young adults that hold vocational and short tertiary degrees in Switzerland are less likely to be in non-standard work compared to young workers with similar credentials in Japan. These results hold true when controlling for gender, parental educational background, industry sector, firm size, and region of living at their means (see Appendix 1).

Conclusion

In this paper, we asked how educational trajectories mediate the risk of non-standard employment for young people in Japan and Switzerland, two countries that have different institutionalised modes of allocating school graduates to jobs. While in the wider international context, both countries show low youth unemployment rates, and from this point of view, can be seen as good places in which to be progressing through the respective transition system, the labour market entrants are nevertheless increasingly facing non-standard entry jobs. Against the background of the increasing risk for school graduates of not being able to find stable employment, we were interested in finding out whether different types of (general, vocational, higher) education have a differential impact on non-standard employment of young workers in countries with differing transition systems.

Based on comparable youth panel data, our results suggest there are remarkably different patterns of non-standard employment among vocational and university graduates across both countries. In Switzerland, those who pursued a vocational education or a short higher education are much less likely to be exposed to non-standard employment compared to those who pursued a long higher (academic) education or other forms of general education. In contrast, in Japan, young adults who pursued a short higher, vocational (or a general) educational track are more likely to become exposed to non-standard work. Therefore, while long higher (academic) education protects youth from non-standard work in Japan, the reverse seems to be true in Switzerland, where vocational and short higher education offer the best chances for standard employment upon labour market entry. Leaving school with only a general education results in pronounced disadvantages in job security upon labour market entry in both countries. All in all, our findings suggest that educational tracks stratify the risk of exposure to non-standard forms of employment in the early career period differently in countries with differing transition systems, indicating differential operational logics of non-standard employment and consequences for the labour market integration of youth in differing contexts.

In Switzerland's collectivist transition system, public commitment to and the involvement of employers in vocational education and training are high and an employment logic (Iannelli and Raffe 2007) prevails, resulting in the allocation of mainly vocationally-trained and certified young adults to jobs. In addition to investment in education (vertical dimension), occupation-specific skills (horizontal dimension) constitute a major sorting criterion upon labour market entry, with occupation-specific credentials (primarily gained in IVET) qualifying individuals to take up work in the respective occupational segments of the Swiss labour market. In this context, the operational logic behind non-standard forms of employment, which mainly affects academically-educated entrants, seems to be one of 'initial screening' and an opportunity for the latter to gain some initial work experience. While IVET graduates have already proven their occupation-specific skills and motivation in standardised 'on-the-job' training schemes, university graduates first need to prove themselves as suitable for specific occupations by entering less secure and less standard forms of employment as a transitional phase. Hence, in the Swiss case, non-standard jobs of young academics may be viewed as stepping-stones rather than as dead-ends (Greppi et al. 2010) and may be combined with further training. Indeed, findings from the Swiss graduate survey highlight a considerable decrease in fixed-term employment within five years after graduation, whereas part-time employment remains unchanged (BFS 2015). Furthermore, Switzerland has a relatively low proportion of graduates who do not find a suitable job compared with other countries. In all, 1 out of 11 people with a university degree are unable to find a job in their field of education in the medium term and face a job-education mismatch (overeducation), which is associated with a wage penalty (Diem and Wolter 2014).

In contrast to Switzerland, employers have traditionally guaranteed the development of skills in the segmentalist Japanese transition system, without notable state intervention, through on-the-job training. In their hiring decisions, the latter value academic credentials, which signals the highly valued general learning potential of graduates. Accordingly, recruiters from top Japanese employers draw graduates from top universities (Goodman 2012, 164). However, as a consequence of the flexibilisation of the Japanese economy and the respective expansion of the secondary labour market segment, transitions from school to work have become more risky for Japanese youth, who lack (long) higher education, but especially for senior high school graduates who were formerly recruited for the ILM. Many employers have upgraded their academic criteria for employee selection to the university level, and good grades in senior high school are no longer sufficient for accessing standard employment.

Hence, one should note that for tertiary education graduates, the prospects for stable employment have also become bleaker in recent years in Japan. The former have increasingly been employed by smaller companies over the last two decades, where employment stability and working conditions are poorer than in large companies.⁴ With an increased allocation of labour market entrants holding little bargaining power in the Japanese labour market to non-standard jobs in the secondary labour market segment, the operational logic of non-standard entry level employment does not coincide with an 'integration' logic. Non-standard entry-level employment in Japan, rather, seems to mirror 'exclusion' processes of those who lack an institutionally paved way to work in the ILM segment. With non-standard work mainly present in secondary segments, where a logic of numerical flexibilisation prevails, non-standard entry level employment for youth in Japan goes hand in hand with employment insecurities, manifesting itself in a 'precariousness' that infects the future course of their lives (Yu 2012; Inui, Higuchi, and Hiratsuka 2015).

To conclude, contrasting the skill-related composition of youth in non-standard employment in early career in Japan and Switzerland suggests country-specific relationships between educational trajectories and non-standard entry-level employment, which relate to different (collectivist vs. segmentalist) transition systems governing the allocation of youth to jobs. With regard to the differing levels of bargaining power of youth that are allocated to non-standard jobs in the respective labour markets of Japan and Switzerland and the distinctive sorting criteria of a 'general learning potential' compared to 'professionalism', different operational logics of non-standard entry level employment seem to prevail in the two countries. Viewing non-standard entry work against the background of differential skill formation regimes allows for going beyond a competing conception of non-standard

employment as either stepping-stones or dead-ends for youth. Rather, distinctive operational logics of non-standard employment can be considered as something that characterises different school-to-work transition systems.

Notes

1. Total number of tertiary types A and B programme graduates according to OECD (2013) (author's calculation).
2. This includes the self-employed. With respect to the Swiss sample, young adults who work more than seven hours per week and are not in education or training programmes anymore are regarded as working.
3. The remarkably lower tertiary graduation rates (short and long higher education) derived from the TREE sample compared to the official Swiss statistics on tertiary graduation rates reported above are due to the fact that many young adults in the cohort investigated via TREE are still in higher education programmes at age 26 and therefore are excluded from our analysis.
4. This development can be observed since the 1980s according to the annual reports (Survey on Employment Trend) of the Japanese Ministry of Health, Labour and Welfare. The reports are accessible at <http://www.mhlw.go.jp>.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Swiss National Science Foundation under [grant number 159281 and 155457].

Notes on contributors

Christian Imdorf holds a SNSF Professorship at the University of Bern, Switzerland. His research projects focus on education systems and school-to-work transitions from a comparative perspective, pathways to higher education, insecure employment of skilled young workers, and new organisational forms of vocational training.

Laura Alexandra Helbling is a junior researcher at the University of Basel, Social Research and Methodology Group. Her PhD research focuses on school-to-work transitions and job and employment insecurities in early career.

Akio Inui is a Professor Emeritus at Tokyo Metropolitan University. His speciality is Education and research focuses on school-to-work transition, especially about precarious youth. His comparative studies with Japan include the UK, Switzerland, and Germany.

ORCID

Christian Imdorf  <http://orcid.org/0000-0002-8015-977X>

References

- Allmendinger, J. 1989. "Educational Systems and Labor Market Outcomes." *European Sociological Review* 5 (3): 231–250.
- Atkinson, J. 1984. "Manpower Strategies for Flexible Organizations." *Personnel Management* 16 (8): 18–31.
- Best, H., and C. Wolf. 2012. "Modellvergleich und Ergebnisinterpretation in Logit- und Probit Regressionen [Comparing Nested Models and Interpreting Results from Logit and Probit Regression]." *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 64 (2), 377–395.
- BFS (Bundesamt für Statistik). 2015. "Hochschulabsolventinnen und Hochschulabsolventen auf dem Arbeitsmarkt. Erste Ergebnisse der Längsschnitbefragung 2013 [University Graduates on the Labour Market. First Results of the Panel Survey 2013]". Neuchâtel: BFS.
- Bolli, T., C. Breier, U. Renold, and M. Siegenthaler. 2015. "Who is Increasingly at Risk of Becoming Unemployed in Switzerland?" [Für wen erhöhte sich das Risiko in der Schweiz, arbeitslos zu werden?] KOF Studie 65, ETH Zürich. Accessed November 16, 2015. <http://www.kof.ethz.ch/publikationen/p/kof-studien/3757/>
- Booth, A. L., M. Francesconi, and J. Frank. 2002. "Temporary Jobs: Stepping Stones Or Dead Ends?" *The Economic Journal* 112 (480): F189–F213.
- Brinton, M. C. 2011. *Lost in Transition. Youth, Work and Instability in Postindustrial Japan*. New York: Cambridge University Press.

- Bussemeyer, M. R. 2009. "Asset Specificity, Institutional Complementarities and the Variety of Skill Regimes in Coordinated Market Economies." *Socio-Economic Review* 7 (3): 375–406.
- Bussemeyer, M. R., and K. Thelen. 2015. "Non-standard Employment and Systems of Skill Formation in European Countries." In *Non-Standard Employment in Post-industrial Labour Markets. An Occupational Perspective*, edited by W. Eichhorst, and P. Marx, 401–430. Cheltenham: Edward Elgar.
- Chung, H. 2015. "Subjective Employment Insecurity Gap between Occupations: Variance across Europe." In *Non-Standard Employment in Post-industrial Labour Markets. An Occupational Perspective*, edited by W. Eichhorst, and P. Marx, 271–297. Cheltenham: Edward Elgar.
- Diem, A., and S. C. Wolter. 2014. "Overeducation Among Swiss University Graduates: Determinants and Consequences." *Journal of Labour Market Research* 47 (4): 313–328.
- Doeringer, P. B., and M. J. Piore. 1971. *Internal Labor Markets and Manpower Analysis*. Lexington, KY: Heath Lexington Books.
- Ecoplan. 2007. *Flexicurity: Bedeutung für die Schweiz. Beiträge zur Sozialen Sicherheit* [Flexicurity: Significance for Switzerland. Contributions to Social Security]. Forschungsbericht 14/07. Bern: BSV.
- Ecoplan. 2010. *Die Entwicklung atypisch-prekärer arbeitsverhältnisse in der Schweiz* [The development of Atypical and Precarious Employment in Switzerland]. Nachfolgestudie zur Studie von 2003. Bern: Seco.
- Eurofound. 2013. "Working Conditions of Young Entrants to the Labour Market. European Foundation for the Improvement of Living and Working Conditions." Accessed September 07, 2015. http://www.eurofound.europa.eu/sites/default/files/ef_files/docs/ewco/tn1306013s/tn1306013s.pdf
- Furlong, A., A. Inui, T. Nishimura, and Y. Kojima. 2012. "Accounting for the Early Labour Market Destinations of 19/20-year-olds in England and Wales and Japan." *Journal of Youth Studies* 15 (1): 1–15.
- Genda, Y. 2003. "Who Really Lost Jobs in Japan? : Youth Employment in an Aging Japanese Society," In *Labor Markets and Firm Benefit Policies in Japan and the United States*, edited by S. Ogura, T. Tachibanaki, and D. Wise, 103–133. Chicago: University of Chicago Press.
- Giesecke, J., and M. Groß. 2003. "Temporary Employment: Chance or Risk?" *European Sociological Review* 19 (2): 161–177.
- Giesecke, J., and M. Groß. 2004. "External Labour Market Flexibility and Social Inequality." *European Societies* 6 (3): 347–382.
- Giesecke, J., and M. Groß. 2006. "Befristete Beschäftigung. WSI-Mitteilungen 5/2006." Accessed September 30, 2015. http://www.boeckler.de/wsimit_2006_05_giesecke.pdf
- Goodman, R. 2012. "Shifting Landscapes. The Social Context of Youth Problems in an Ageing Nation." In *A Sociology of Japanese Youth. From Returnees to NEETs*, edited by R. Goodman, Y. Imoto, and T. Toivonen, 159–173. London: Routledge.
- Greppi, S., M. Lucchini, J. Assi, and C. Marazzi. 2010. "The Determinants of Fixed-term Employment in Contemporary Switzerland." *FORS Working Paper Series 2010–2014*. Lausanne: FORS.
- Iannelli, C., and D. Raffe. 2007. "Vocational Upper-secondary Education and the Transition from School." *European Sociological Review* 23 (1): 49–63.
- ILO (International Labour Organization). 2012. *Global Employment Trends for Youth 2012*. Geneva: International Labour Office. Accessed September 7, 2015. http://www.ilo.org/global/research/global-reports/global-employmenttrends/youth/2012/WCMS_180976/lang-en/index.html
- ILO (International Labour Organization). 2015. "Non-standard Forms of Employment." Report for Discussion at the Meeting of Experts on Non-Standard Forms of Employment, Geneva, February 16–19. http://www.ilo.org/wcmsp5/groups/public/-ed_protect/-protrav/-travail/documents/meetingdocument/wcms_336934.pdf
- Imdorf, C., and S. Hupka-Brunner. 2015. "Gender Differences at Labor Market Entry in Switzerland." In *Gender, Education and Employment: An International Comparison of School-to-Work Transitions*, edited by H.-P. Blossfeld, S. Buchholz, J. Skopek, and M. Triventi, 267–286. Cheltenham: Edward Elgar Publishing.
- Inui, A. 1993. "The Competitive Structure of School and the Labour Market: Japan and Britain." *British Journal of Sociology of Education* 14 (3): 301–313.
- Inui, A. 2003. "Restructuring Youth: Recent Problems of Japanese Youth and Its Contextual Origin." *Journal of Youth Studies* 6 (2): 219–233.
- Inui, A. 2009. "NEETs, Freeters and the New Labour Market Periphery: New Category, New Precariousness." In *Handbook of Youth and Young Adult: New Perspectives and Agendas*, edited by Andy Furlong, 176–181. Abingdon: Routledge.
- Inui, A., A. Higuchi, and M. Hiratsuka. 2015. "Getting to Precariat: Young People's Precarious Transition from School to Work, Japan's Case." In *Handbook of Children and Youth Studies*, edited by J. Wyn, and H. Cahill, 583–605. Springer Singapore.
- Inui, A., and T. Hosogane. 1995. "General Education as Foundation for Work?: The Efficiency and Problems of Japanese Upper Secondary School." In *Youth, Education and Work*, edited by L. Bash and A. Green, 162–172. London: Kogan.
- Inui, A., S. Masahiko, and M. Hiratsuka. 2007. "Precarious Youth and Its Social/Political Discourse: Freeters, NEETs, and Unemployed Youth in Japan." *Jinbunakuho (Tokyo Metropolitan University)* 381: 73–100.
- Karlson, K. B., A. Holm, and R. Breen. 2012. "Comparing Regression Coefficients Between Same-sample Nested Models Using Logit and Probit: A New Method." *Sociological Methodology* 42 (1): 286–313.
- Long, S. J. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage.
- Long, S. J. 2009. "Group Comparisons in Logit and Probit Using Predicted Probabilities." Unpublished work, Indiana University. Accessed November 13, 2014. http://www.indiana.edu/~jslsoc/files_research/groupdif/groupwithprobabilities/groups-with-prob-2009-06-25.pdf

- Maurice, M. 2008. "La Formation Professionnelle en France, en Allemagne et Au Japon. Trois Types de Relation entre L'école et l'entreprise." [Vocational Education and Training in France, Germany and Japan. Three Types of School–Company Relationships]. In *La Construction Sociale Des Acteurs De L'entreprise*, edited by M. Maurice, 203–216. Toulouse: Octarès Editions.
- Maurice, M., F. Sellier, and J. J. Silvestre. 1979. "La production de la hiérarchie dans l'entreprise: recherche d'un effet sociétal: Comparaison France-Allemagne." [The Production of Hierarchy in Companies : Research about a Societal Effect : Comparing France and Germany] *Revue Française De Sociologie* 20 (2): 331–365.
- Meier, A. 2014. *The New Employment Relationship*. Zurich/St. Gallen: DIKE.
- Mood, C. 2010. "Logistic Regression: Why We Cannot Do What We Think We Can Do, and What We Can Do about It." *European Sociological Review* 26 (1): 67–82.
- Müller, W., and Y. Shavit. 1998. "The Institutional Embeddedness of the Stratification Process". In *From School to Work. A Comparative Study of Educational Qualifications and Occupational Destinations*, edited by Y. Shavit and W. Müller, 1–48. Oxford: Clarendon Press.
- Nohara, H. 2000. "Male and Female Patterns of Labour Force Participation. A Comparison Between France and Japan". In *Embedding Organizations. Societal Analysis of Actors, Organizations and Socio-economic Context*, edited by M. Maurice, and A. Sorge, 373–387. Amsterdam: John Benjamins.
- OECD (Organisation for Economic Co-operation and Development). 2010. "How Good is Part-time Work?" In *Outlook 2010*, edited by O. E. C. D. Employment. 211–266. Paris: OECD.
- OECD (Organisation for Economic Co-operation and Development). 2013. *Education at a Glance 2013: OECD Indicators*. Paris: OECD.
- OECD (Organisation for Economic Co-operation and Development). 2014. "Non-regular Employment, Job Security and the Labour Market Divide." In *Employment Outlook 2014*, edited by OECD. 141–209. Paris: OECD.
- Raffe, D. 2008. "The Concept of Transition System." *Journal of Education and Work* 21 (4): 277–296.
- Sacchi, S. 2011. *Construction of TREE Panel Weights. Documentation for the Panel Waves from 2000 to 2010*. Bern: TREE & cue sozialforschung.
- Sacchi, S., and A. Salvisberg. 2011. *Berufseinsteiger-Barometer 2010*. [VET graduate employment barometer 2010] Report im Auftrag des Bundesamts für Berufsbildung und Technologie (BBT). Ausführliche Version vom Februar 2011. Zürich: Universität Zürich & Stellenmarkt-Monitor Schweiz.
- Scherer, S. 2004. "Stepping-stones or Traps?" The Consequences of Labour Market Entry Positions on Future Careers in West Germany, Great Britain and Italy." *Work, Employment and Society* 18 (2): 369–394.
- SERI (State Secretariat for Education, Research and Innovation). 2013. *Vocational and Professional Education and Training in Switzerland 2013. Facts and Figures*. SERI: Bern
- Standing, G. 2011. *The Precariat: The New Dangerous Class*. London: Bloomsbury Academic.
- Thelen, K. (2004). *How Institutions Evolve. The Political Economy of Skills in Germany, Britain, the United States, and Japan*. Cambridge: Cambridge University Press.
- Toivonen, T., and Y. Imoto. 2012. "Making Sense of Youth Problems." In *A Sociology of Japanese Youth. From Returnees to NEETs*, edited by R. Goodman, Y. Imoto, and T. Toivonen, 1–29. London: Routledge.
- TREE. 2013. *TREE Project Documentation 2000–2012*. Basel: TREE.
- Weber, B. A. 2001. "Arbeitslosigkeit in der Schweiz: Was passierte in den Neunzigerjahren? [Unemployment in Switzerland: What happened in the Nineties?]" *Die Volkswirtschaft* 6: 4–9.
- Yu, W. 2012. "Better off Jobless? Scarring Effects of Contingent Employment in Japan." *Social Forces* 90 (3): 735–768.

Appendix 1

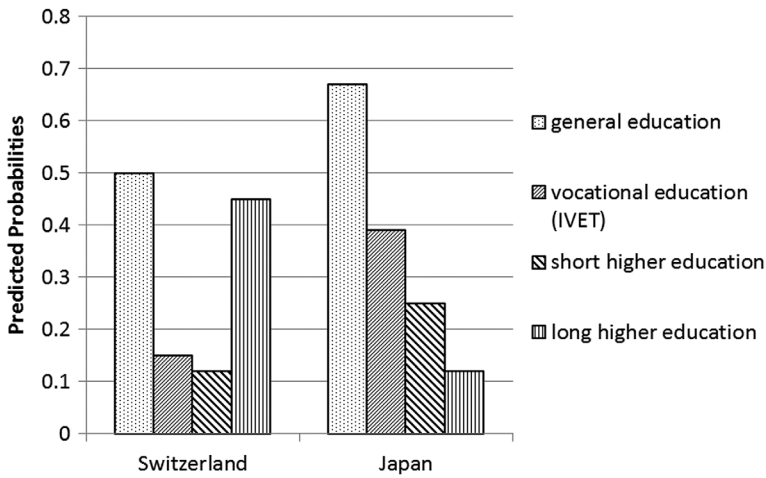


Figure A1. Predicted probabilities comparing Switzerland and Japan/controls.

Note: Probability of non-standard employment for young employees by educational attainment across both countries, holding gender, duration since leaving school, parental education, industry, firm size, and region of living constant at their means.

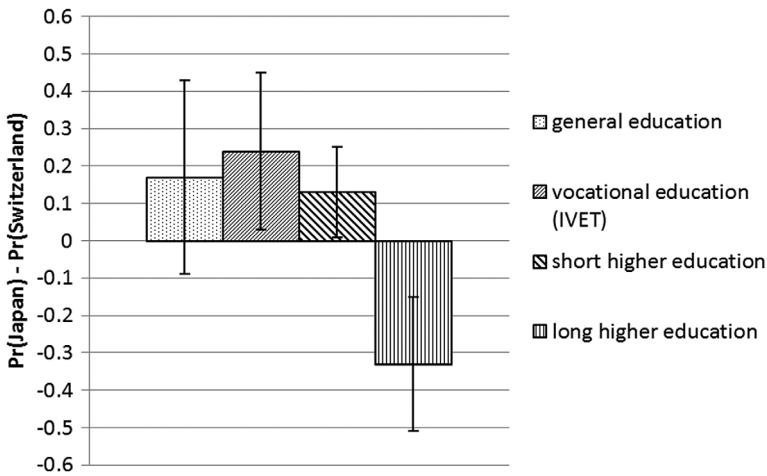


Figure A2. Differences in predicted probabilities/controls.

Note: Differences in the probability of non-standard work by educational attainment across both countries, holding gender, duration since leaving school, parental education, industry, firm size, and region of living constant at their means. Tick marks indicate 95% confidence intervals: significant differences in predicted probabilities of non-standard work ($p < 0.05$) for the educational levels of vocational, short, and long higher education across both countries.