

ANDREW SCHRANK

*Mobile Professionals and Metropolitan Models:
The German Roots of Vocational Education
in Latin America*

Abstract

The Latin American model of vocational education has been widely portrayed as a homegrown success story, particularly by scholars and stakeholders who are aware of the region's skill deficits, wary of alien solutions, and suspicious of institutional transfers more generally. Is the Latin American model really homegrown? I use a combination of qualitative and quantitative data to trace the model's mores and methods not to the New World but to Central Europe and go on to identify three different transmission paths in the 20th century: *imitation* by Latin Americans of German origin, descent, and/or training in the run-up to World War II; *propagation* by West German *attachés* and advisors in an effort to rehabilitate their country's image in the wake of the war; and *adaptation* by local employers and policymakers—who received additional support from Germany—at the turn of the last century. The results suggest that institutional importation is less a discrete *event* or *outcome* to be avoided than an ongoing *process* that, first, entails translation, adaptation, and at times obfuscation by importers as well as exporters; and, second, is facilitated by immigrants, their descendants, and diplomats in transnational contact zones.

Keywords: Migration; Germans; Vocational Education; Latin America; Professionals.

Introduction

A SUBSTANTIAL BODY of literature holds that “institutions do not travel well” [Machinea 2005: 4; Rodrik 2007: 41; Drezner 2009: 190; Rafiqui 2009: 347; Lambach and Debiel 2010: 160; Morlino 2016:

I would like to thank the EJS editors and reviewers, as well as participants in panels and workshops at the American Sociological Association, Society for the Advancement of Socio-Economics, Latin American Political Economy Network, and the Watson Institute for International and Public Affairs, for helpful feedback on earlier drafts. All remaining errors are my own.

185

Andrew SCHRANK, Brown University [andrew_schrank@brown.edu]

European Journal of Sociology, 61, 2, (2020), pp. 185–218—0003-9756/20/0000-900\$07.50 per art + \$0.10 per page
© *European Journal of Sociology* 2020. doi: 10.1017/S0003975620000065

32], and are particularly ill-disposed toward long-distance travel [Berkowitz *et al.* 2003; Roland 2004; Seidler 2014], with the Latin American experience frequently being invoked by way of example. After all, the region bears the scars of a number of dubious imports including French legal codes that by all accounts work better at home than abroad [Merryman 1996; Beck *et al.* 2003; Berkowitz *et al.* 2003; LaPorta *et al.* 2008; Kogut 2012]; presidential regimes that are purportedly prone to gridlock in the United States and *golpes* south of the border [Linz 1990; Misztal 1992; Helmke 2010; cf. Lipset 1994]; and a Washington Consensus—codified by a British expatriate, no less [Edwards 2010: 65]—that has proven disappointing to supporters as well as critics [Williamson 1997; Offe 2000; Przeworski 2004; Centeno and Cohen 2012; Connell and Dados 2014]. Observers of the region have therefore abandoned the idea of “blueprints” and “best practices” [Rodrik 2000: 14; Evans 2004: 30] for aphorisms like “one size doesn’t fit all” [Pritchett and Woolcock 2002: 3], “context matters” [Portes 2005: 38], and “Latin American solutions to Latin American problems” [Tanner 2008: 260; Ignatieff 2014: 465; Bertucci 2015: 108; Escanho 2015: 2].

The latter slogan, in particular, echoes the call for “southern solutions to southern problems” [UNESCO 2013: 9; see also UNCTAD 2010: 4; Zhou 2010: 4; UNDP 2011: 420; Thomas 2013: 1; ILO 2013a: 11; WHO 2014: 11] that has been gaining support in the donor community and which is invoked to explain the diffusion of special economic zones and conditional cash transfers in Asia and Africa. “Born out of similar development contexts and sometimes even familiar cultural background,” explain Xiaojun Grace Wang and Shams Banihani of the United Nations Development Programme, “these southern solutions often prove to be more relevant” [Wang and Banihani 2016: 15] than northern imports that are rigid, costly, and/or ill-suited to their new surroundings.

Latin American vocational training institutions (VTIs) have been portrayed as another southern solution [UNDP 2009: 167; Amorim *et al.* 2013: 5; ILO 2013b: 18]. After all, the “Latin American model” [Middleton *et al.* 1991: 46; Gasskov 1994: 57–58; Carton and Tawil 1997: 24; Jäger and Bühner 2000: 15; Galhardi 2002: 1; Ramirez Guerrero 2002: 56; de Ferranti *et al.* 2003: 112; Jacinto 2008: 4/36] of payroll tax-financed, stakeholder-governed training was allegedly developed by Brazil’s National Industrial Training Service (*Serviço Nacional de Aprendizagem Industrial* or SENAI) in the early 1940s, when the US was distracted by World War II [Sherman 2000: 69]. It was then disseminated to the rest of the region over the course of the next

half century, when import-substituting industrialization placed a premium on the development of a skilled, manual labor force [Schmitter 1971: 184; Howes 1975: 195; Castro 1999: 44-45; Márquez 2001: 9; Jacinto 2008: 4-36; Carrillo and Neto 2013: 88]. Finally, it was responsible for the education and training of millions of Latin American workers [Middleton *et al.* 1991: 46; Casanova 2013: 14] including, most famously, Luiz Inácio Lula da Silva [French 2010: 141], who would go from metalworker to union activist to President of Brazil. In fact, Michel Carton and Sobhi Tawil have described the Latin American model as an “innovative and endogenous” alternative in a region that has traditionally been “polarized between European and American influences,” thereby endorsing the idea that institutions that are indigenous to their regions of adoption are superior to their foreign or extra-regional counterparts [Carton and Tawil 1997: 24].

Are southern solutions really superior to their northern counterparts? I address the question by revisiting the “neglected transnational history” [Penny 2013: 363; see also Steinmetz 2005; Rinke 2013; Manz 2014; Cassidy 2015] of Germans in 20th century Latin America and find not only that Brazil adopted key features of SENAI from Germany during the war but that direct ties to Germany—forged by immigrants, investors, and diplomats in the prewar era—constitute a key predictor of the model’s diffusion to the rest of the region after the war. While countries like Argentina, Colombia, and Venezuela had relatively close connections to prewar Germany, and therefore established training institutions like SENAI in the 1950s, their neighbors had less exposure to German ideas and institutions, and therefore maintained an “incentive-driven” [Márquez 2001: 8] approach to training into the 1980s and beyond. The results suggest that institutional importation is less the discrete *event* or *outcome* that theories like “legal origins” [LaPorta *et al.* 2008] and “varieties of capitalism” [Hall and Soskice 2001; Schneider 2013] have, at their worst, implied [Schmidt 2009; Fast 2016; cf. Jackson and Deeg 2008: 555] but an ongoing *process* that, first, entails translation, adaptation, and at times obfuscation by importers as well as exporters; and, second, is facilitated by “mobile professionals” [Favell 2003: 399; see also Fechter and Walsh 2010]—including skilled immigrants and investors, their descendants, and diplomats—from both importing and exporting countries in transnational “contact zones” [see Pratt 1991; Steinmetz 2007: 31; Pence and Zimmerman 2012: 495; Manz 2014: 4; Penny and Rinke 2015: 181; and Fortwengel and Jackson 2016 on contact zones involving Germans in particular].

I have divided the rest of the paper into four principal sections. Section 1 discusses the alleged obstacles to institutional transfer, in general, and to the transfer of the German model of vocational education and training, in particular, including cultural as well as material incongruity between Germany and Latin America. Section 2 presents evidence that the roots of Latin American VTIs are nonetheless to be found in Germany, rather than Brazil, and identifies three distinct transmission paths: *imitation* by Latin American professionals of German origin and descent in the years prior to the Second World War; *propagation* by West German donors in the postwar era; and *adaptation* by policymakers and employers—who not only had distinct needs, capacities, and cultures but received further support from German firms and donors—in the more recent era of globalization. Section 3 introduces quantitative data on the diffusion of VTIs in Latin America and finds *descriptive* evidence that they were indeed established more rapidly in countries that had closer ties to Germany in the early and mid-20th century. And Section 4 concludes that the relative success of the so-called Latin American model speaks neither to the superiority of indigenous institutions in the Global South nor to the advisability of “institutional engineering” [Przeworski 2004: 166] by great powers but to the roles of (i) mobile professionals in the public as well as private sectors in *importing* and *adapting* institutions to the needs of their local environments; and (ii) comparative historical sociologists in illuminating the—often deliberately—hidden histories of late developing countries more generally.

Intellectual context

The literature on institutional transfer is marked by a profound skepticism concerning the prospects for cross-cultural learning and mimicry. While modernizers like Peter the Great, Kemal Atatürk, and the architects of the Meiji Restoration have been portrayed as inveterate importers of western models and methods [Lewis 1961; Gerschenkron 1962; Dore 1973; Skocpol 1979; Westney 1982; Goldman 2006], they have simultaneously been dismissed as exceptions to a rule acknowledged by dozens of historians and social scientists.¹ “Countries are simply too

¹ For instance, Theda Skocpol and Ellen Kay Trimberger noted that in the run-up to modernization neither Russia, Turkey, nor Japan “had been incorporated into a colonial

empire” [Skocpol and Trimberger 1977-1978: 107]. Cyril Black found that “their capacity to mobilize skills and resources” [Black 1975: 483] were—perhaps for that very

different, economically, legally, politically, and culturally to make fruitful policy borrowing a serious possibility,” in the words of Martin De Jong and his colleagues [De Jong *et al.* 2007: 5]. “If they differ too much from one another, even ambitious policy actors in the recipient country who actively attempt such an adoption, will run into incompatibility and incongruence which make the transfer impossible or even deleterious.”²

The sources of incompatibility and incongruence are cultural as well as material, and Alejandro Portes portrays the long-neglected concept of social roles as the key to their interpretation and analysis [Portes 2006: 243]. Consider, for example, the differences between formally similar roles in fundamentally different societies. “That of ‘policeman’ may entail, in less developed societies, the expectation to compensate paltry wages with bribe-taking, a legitimate preference for kin and friends over strangers in the discharge of duties, and skills that extend no further than using firearms and readily clubbing civilians at the first sign of trouble” [Portes 2006: 243]. When “modernizers” try to professionalize the police officer’s role, therefore, they will run into opposition not only from the officers and their kin, who have come to expect and—perhaps depend upon—payoffs and preferential treatment, but from public officials and their allies, who have come to treat the police force less as a public service provider than as their personal militia.

The risks are compounded not only when institutions are transferred from “like-to-unlike” [De Jong and Stoter 2009: 321] societies but when they are “tightly coupled” [Orton and Weick 1990] to broader institutions. “While in the loosely coupled areas of law a transfer is comparably easy to accomplish,” in the words of Gunther Teubner, “the resistance to change is high when law is tightly coupled in binding arrangements to other social processes” [Teubner 2001: 426]. Examples would include commercial laws that are linked to health, science, technology, and culture. “It is in their close links to different social worlds,” he continues, “that we can see why legal institutions resist transfer in various ways” [Teubner 2001: 431].

Nor is commercial law unique, for the German model of vocational education provides a no less compelling example of a “tightly coupled” institution [see, e.g., Hannan *et al.* 1996: 16-17; Hemerijck and Manow

reason [Black 1978: 414]—all but unparalleled among non-western societies. And Samuel Huntington maintained that Peter and Atatürk—if not the Meiji oligarchs—nonetheless “created ‘torn countries,’ unsure of their cultural identity” [Huntington 1996: 35].

² A related literature addresses not policy transfer between different “families of nations” [De Jong *et al.* 2007] but private sector adaptation to “institutionally distant” environments [see, e.g., Fortwengel 2017: 794; as well as Fortwengel and Jackson 2016].

2003: 229; Estévez-Abe 2005: 26; Trampusch 2008: 12] that is by most accounts ill-disposed to transfer. After all, the “dual” system pioneered in Imperial Germany and polished in the postwar era is designed to address the fact that unfettered markets tend to underprovide skills, in general, and “partially transferable” skills that are “valued by some but not all employers” [Robalino *et al.* 2012: 51], in particular. Employers worry that the returns to training are elusive in a world of worker mobility, and thus limit their efforts to the cultivation of firm-specific skills that are not portable across the labor market. Workers worry that their efforts to fill the gap by paying for their own training will be devalued by employers or rendered redundant over time, and thus fail to make up the difference. And the low-level equilibrium that results demands a *collective* response by “firms, intermediaries, and the state” [Busemeyer and Trampusch 2012: 4].

The German response entails a combination of “school-based learning with practical firm-based training” [Thelen 2007: 248; see also Herrigel 1996: 52], and thus demands the cooperation of educators, employers, workers, and their respective associations—not to mention the public officials who oversee and co-finance their efforts to ensure that German firms and workers have the skills they need to keep up with their foreign rivals. “In short,” explains Wade Jacoby, “the system depends on both a dynamic private sector and an articulated network of other organizations and associations in order to function properly” [Jacoby 2000: 191; see also Culpepper 2003].³

In fact, the German system has taken on more stakeholders over time. Kathleen Thelen notes that the original German model emerged when an “independent artisanal sector” was “endowed with the rights to regulate training and to certify skills” [Thelen 2004: 39], in part to provide a conservative counterweight to the country’s increasingly radical labor movement, in the late 19th century. Large-scale industry came on board in the run-up to the Second World War, she argues, when the Nazis built “a more unified national system for apprenticeship training” [*ibid.*: 239] on the backs of both the original artisanal system and organizational and technical innovations that had been developed by the manufacturing sector in the Weimar era. While the war itself posed a number of challenges, to be sure, the system was reconstituted “along lines that built directly on pre-war institutions” [*ibid.*: 240] in the postwar era, by

³ Others maintain “that institutional domains are only ‘loosely coupled’ with one another” [Herrigel and Zeitlin 2010: 671],

and are thus susceptible to “repositioning and reform,” if not necessarily transfer to new and different environments.

granting the artisanal and industrial sectors formal responsibility for plant-based vocational training in the 1950s [*ibid.*: 241], and incorporating the labor movement in 1969, when the Grand Coalition government of the Social Democrats and the Christian Democrats at long last assigned responsibility for in-plant training to “tripartite boards at the national and state levels” [Thelen 2004: 242; as well as page 262 on the “high degree of continuity” between the prewar and postwar models]. By the late 20th century, therefore, the dual system depended on artisans, manufacturers, unions, and their interlocutors in the public sector—who played a key role in “tipping the scales toward collectivism” [Thelen and Busemeyer 2012: 88] whenever individual stakeholders would threaten to defect from the *de facto* coalition.

According to Jacoby, East Germany lacked the necessary “patterns of associationalism and intergroup cooperation” [Jacoby 2000: 207], and thus proved inhospitable to the dual system in the wake of reunification. But the former German Democratic Republic is not alone. Others note that China, France, the United Kingdom, Indonesia, South Korea, and a number of African countries have tried to import the dual system to little or no avail [Paryono 2005: 46]. Contemporary observers doubt that the German model would work “well in the United States, a very different economy and society” [Hockenos 2017; see also Hanushek 2017]. And Francis Fukuyama warns that the German model is part of “a broader education system that would not be easy to break apart into pieces for export” and ultimately depends on “social and cultural traditions that are unique to central Europe” [Fukuyama 1995: 237].⁴

The literature on vocational education thus constitutes a microcosm of the broader literature on institutional transfer. Experts claim that institutions do not travel well, and are particularly ill-suited to long-distance travel. Their claims have been applied to German training institutions in particular [Drake 1994: 155; Blossfeld and Stockmann 1998-1999: 16; Allen 2004: 1151; UNIDO 2017: 114]. And Latin Americans have therefore been portrayed as the fortunate beneficiaries of a “Southern-grown” [Amorim *et al.* 2013: 9] alternative developed and exported by Brazil [Amorim *et al.* 2013: 35-36; see also Caballero Tamayo 1969; Carton and Tawil 1997; Trollo 2012]. While the German model is classroom-based, and involves simultaneous apprenticeships at

⁴ Fukuyama nonetheless admits that “culture is not an unbending, primordial force but something shaped continuously by the flow of politics and history” [Fukuyama 1995: 211], and cites the “enormous cultural differences”

between East and West Germans by way of evidence. He would thus in all likelihood attribute the dual system’s failure to take root in the former East Germany [Jacoby 2000] to the cultural legacies of communist rule.

TABLE I
German and Latin American approaches to vocational education and training.

	<i>Germany</i>	<i>Latin America</i>
<i>Financing</i>	Education budgets and employer contributions	Dedicated payroll taxes
<i>Delivery</i>	Public schools and employers	Public vocational training centers
<i>Timing</i>	Simultaneous school and in-service training	Dominated by pre-employment training
<i>Governance</i>	Education ministry and business chambers	Tripartite boards

participating firms, the Latin American alternative is “center-based” [Dougherty 1989: 14; Ducci 1991: 118; Ibarrarán and Rosas Shady 2009: 204-205], and prioritizes pre-employment training at public institutions that are financed by payroll taxes and governed by tripartite boards [Ramírez Guerrero 2002: 57; see also Whalley and Ziderman 1990: 378; Gasskov 1994: 57-58; Galhardi 2002: 6; de Ferranti *et al.* 2003: 112]. “Being relatively independent from the government and being funded from a levy on the payroll,” argues Claudio de Moura Castro, “most of these institutions are quite robust and affluent” [Castro 2008: 3]. They are also close to employers and are correspondingly able to evaluate and meet their needs for both pre-employment and—when necessary and available—in-service training.

Table I distills the principal differences between the contemporary German model and the “soft or light Dual System” [Castro 2009: 15] found in Latin America in terms of four key dimensions: the funding, delivery, timing, and governance of training.

The table leaves out some important details. For instance, the Germans have been known to use the *threat* of payroll taxes to *compel* employer contributions when they were not otherwise forthcoming [Harhoff and Kane 1997: 193; Thelen 2007: 254]. Latin American VTIs have at times facilitated in-service as well as pre-employment training [World Bank 1991: 46]. And Brazilian VTIs are exceptional in Latin America insofar as they are run not by tripartite boards but by trade associations closer to the original German model [Galhardi 2002: 9; Ramírez Guerrero 2002: 57], perhaps due to their precocious establishment before Germany’s postwar reforms. But the basic portrait painted by the table is accurate: While the German model is “heavily voluntarist”

[Thelen 2007: 254] in orientation, and places the social partners in the driver's seat, the "Latin American model" [Whalley and Ziderman 1990: 378; World Bank 1991: 46; Gasskov 1994: 57; Atchoarena 1996: 31; Galhardi 2002: 6; de Ferranti *et al.* 2003: 112] is compulsory in nature and driven—if not dominated—by the public sector.

In short, Latin American governments have addressed the free rider problem that bedevils skill formation by taxing employers and workers in an effort to pay for vocational training, and giving their representatives input into the allocation of the payments. The programs thereby created tend to improve the likelihood and quality of employment at the individual level [Jimenez *et al.* 1989; Ibararán and Rosas Shady 2009; Jaramillo 2013] and are broadly popular. Table 2 includes data on the working age population, the number of participants in vocational education and training (VET) programs, the percentage of youth and working-age adults participating, the absolute number of apprentices, and the number of apprentices per 1,000 employed individuals for 12 Latin American countries in 2016.

While apprenticeships are for the most part limited to Brazil and Colombia, and nowhere approach Germany's 39 apprentices per 1,000 employed individuals, overall participation in VET programs is quite high—ranging from 12% of the working-age population in Colombia, to less than 1% in Bolivia, to approximately 4% in the median country. Youth participation is much higher: an estimated 7% of the Latin American population between the ages of 15 and 24 [Vargas Zúñiga 2017: 11]. And VET programs have fueled the growth of key sectors in a number of Latin American countries, including automobiles in Brazil [Weinstein 1996: 257-8; Ramalho and Santana 2002: 761-762], apparel and footwear in the Dominican Republic [Schrank 2011: 8; Hertel 2019 108-109], and information technology in Costa Rica [Nelson 2009: 81].

The point, however, is neither to exaggerate the success nor to downplay the variety of the region's vocational training institutions. While they have occasionally been subject to rigorous evaluations that reveal positive impacts on job quality and quantity [Ibararán and Rosas Shady 2009; Ibararán *et al.* 2019], they have at times been poorly managed or had trouble anticipating the demand for skilled labor [Middleton and Ziderman 1997: 8; Castro 1998: 1]. But the very best examples—including not only SENAI in Brazil but SENA (*Servicio Nacional de Aprendizaje*) in Colombia and INA (*Instituto Nacional de Aprendizaje*) in Costa Rica—are by all accounts "model institutions,

TABLE 2
Vocational education and training in Latin America, 2016

Country	Population, 15-64	Participants	Participants % youth population	Participants % working age population	Apprentices	Apprentices per 1,000 employed
Bolivia	6,742,195	61,395	2.97	0.91	1,706	<1
Brazil	143,590,074	6,482,449	18.99	4.51	412,888	5
Chile	12,531,890	880,315	32.17	7.02	1,283	<1
Colombia	32,765,192	4,069,644	49.49	12.42	345,206	17
Costa Rica	3,389,559	132,850	16.56	3.92	289	<1
Dominican Rep	6,735,370	694,388	36.12	10.31	433	<1
El Salvador	4,082,038	322,534	25.99	7.90	1,908	1
Guatemala	9,908,023	351,292	10.19	3.55	975	<1
Honduras	5,799,721	205,744	11.79	3.55	189	<1
Panama	2,610,791	63,074	9.48	2.42	2,124	1
Paraguay	4,332,273	177,173	13.25	4.09	1,020	<1
Peru	20,207,760	510,852	9.14	2.53	5,328	<1

Sources: OIT-CINTERFOR 2017; World Bank 2020.

with ample resources to allow them to offer the very best training” [Castro 2008: 3].⁵ I will discuss their roles and roots in the next section.

The German roots of Latin American training

Opponents of imported institutions take great pride in the success of the Latin American VTIs. Insofar as they are based on a Brazilian template, after all, the “S&I institutions” [Castro 2007: 10]—so-called because their names almost invariably begin with an “S” or an “I”—underscore not only the limits to institutional importation but the potential for indigenous innovation [UNDP 2009: 167; Amorim *et al.* 2013: 5; ILO 2013b: 18], and the S&I institutions deviate from the German model in several key respects including their funding, delivery, and oversight [Eichorst *et al.* 2012: 20]. But their originality and distinctiveness are at best partial, for the founders of SENAI in the 1940s included Brazilian engineers of German origin or descent and, not least of all, *Weltanschauung* [Weinstein 1996: 255]; the funders of SENAI’s “clones” [Castro 1998: 2] in the postwar period included German aid administrators and foundations [Stockmann 1999]; and the adaptations being undertaken by the clones today are modeled upon—and in many cases supported by—their German counterparts. I will elaborate and offer examples of each mechanism in the next three subsections.

From dual to school: German immigrants and the origins of vocational education in Brazil

German influence over Brazilian VET anticipated the founding of SENAI by at least one generation, for Teutonic immigrants to Brazil portrayed themselves as “paragons of industriousness” [Cassidy 2015: 2] in the 19th century; their self-portrait was in large measure embraced by local officials; and by the dawn of the 20th century their ideas had assumed a prominent position in the country’s public (and publicly financed) technical schools. Take, for example, the *Gewerbeschule* and the *Instituto Parobé* in the state of Rio Grande do Sul, home to a large population of German immigrants. While the former conducted classes

⁵ Other relative success stories include the National Service for Commercial Training (*Serviço Nacional de Aprendizagem Comercial*, a SENAI clone dedicated to the needs of the

service sector in Brazil [Cohn 2012]; and INFOTEP in the Dominican Republic [Labarca 1999; Sabel *et al.* 2012; Schrank 2011; Ibarrarán *et al.* 2019].

in German, the latter offered classes in Portuguese but boasted German instructors and a curriculum developed by a headmaster of German descent, João Lüderitz, on the basis of a number of visits to Germany and neighboring countries [Lima 2000]. In fact, Daniela de Campos holds that upon his return to Brazil practical training assumed pride of place in the curriculum. “Students produced goods for the market, guaranteeing the institute, the masters, and themselves a supplemental income,” she explains [Campos 2013: 9; my translation; see also Howes 1975: 197]. “Lüderitz believed that industrialization was essential for learning, for it would allow the student to come into contact with the factory environment.”

Nor was Rio Grande do Sul unique. A Swiss engineer by the name of Roberto Mange began to offer courses for railroad mechanics in São Paulo in the 1920s, traveled to Germany to learn the latest techniques in 1929, and eventually opened a highly regarded school in São Paulo. “The courses themselves, taught by special instructors, utilized the ‘methodical series’ approach to training perfected in Germany whereby apprentices begin with the simplest process or piece, repeat the task until perfected, then move in a highly regimented fashion to more and more complicated tasks” [Weinstein 1990: 390].⁶ While they offered an alternative model of worker training, and thus proved influential over time, his efforts made no more than a dent in the growing demand for skilled labor, and by the mid-1930s, therefore, President Getúlio Vargas had appointed a commission to explore alternatives.

The commission’s members included not only Mange and several other Paulista educators but Rodolpho Fuchs, a student of Lüderitz and Nazi sympathizer who would return from Germany in 1938 to wax enthusiastic about the country’s apprenticeship system [Weinstein 1990: 391; Pronko 2003: 68; Cunha 2012: 386]. Whereas the commission as a whole would therefore concern itself with skill formation in the narrow sense, Fuchs would portray apprenticeship as “a vehicle for discipline, social control, and worker integration into the state-directed project for national development” [Weinstein 1990: 392; see also Weinstein 1996: 88] more generally, and therefore advocate firm-based training for all male workers in Brazil [Weinstein 1996: 87; Weinstein 1997: 80; Pronko 2003: 134].

⁶ See also Weinstein 1996: 28; Pronko 2003: 130; and Castro 2014: 1733 on Mange’s myriad links to Germany.

In other words, Fuchs openly advocated Brazil's embracing of the dual system. He praised both in-plant apprenticeships and their "voluntary" financing by employers in Germany. He traced their success not only to the policies of the Nazis but to the practices they had inherited from their predecessors. And he nonetheless predicted that efforts to adopt similar policies in Brazil would be met with massive resistance from recalcitrant employers [Cunha 2012: 389].

His prediction would soon be confirmed, moreover, for the Paulista industrialists worried that Fuchs was exaggerating their demand for skilled labor and convinced Vargas to design SENAI with an eye toward training no more than 15% of the incoming industrial labor force in 1942. While Fuchs would therefore accuse the president of placing "the needs of the national economy" above "the needs of Brazilian youth" [Weinstein 1996: 99], and express disdain for the new program's structure, his "observations on training in Nazi Germany and his call for close cooperation between training organs and industry undoubtedly influenced subsequent policy." Employers "have played the preponderant role in decision-making, in designing the institutional framework of the system, and in implementing VET programs" [Assumpção-Rodrigues 2013: 18] in Brazil, and apprenticeships have been part of SENAI's programming "from the beginning" [Castro 2009: 15; see also Wilson 1993: 275].

In fact, John Middleton and Terri Demsky of the World Bank have portrayed "linkages" between firms and training authorities as perhaps the "most important" aspect of SENAI's success, and note that they have "been part of the SENAI tradition since the 1940s" [Middleton and Demsky 1988: 73], when the agency was born and Lüderitz and Mange assumed the directorships of the national and São Paulo offices respectively. Employers offered SENAI input and SENAI took their needs into account. "Combined with expanding employment and increasingly effective enterprise management," they continue, "this helped create a supportive 'ethos' in which the needs of employers were taken seriously and reflected in training plans and curricula" [Middleton and Demsky, 1988: 73; see also Howes 1975: 212 and Weinstein 1996: 115-116, on Lüderitz and Mange's roles in SENAI].

Nor are Middleton and Demsky alone in their assessment. Jörg Meyer-Stamer noted that SENAI offered two to three year-long training courses on request and on-site in the late 1990s, when almost half of all training occurred "on the firm's premises" [Meyer-Stamer 1997: 303]. And a number of observers have identified intense collaboration in the auto industry, where SENAI has worked with both multinational firms (e.g., Mercedes-Benz, Volkswagen) and their suppliers in an effort to

impart transferable skills and inhibit free-riding among stakeholders [Ramalho and Santana 2002: 761-762; see also Findlay 1984: 208; Wolfe 2010: 242; Ferreira 2016: 247; as well as Busemeyer and Trampusch 2012 on collective skill formation more generally].

But the German legacy went beyond the realm of policy, or the ethos of employer involvement, to include the ethos of manual production itself. According to Castro, Mange set the intellectual agenda at SENAI in the 1940s and instilled German artisanal values that would persist for the next half century [Castro 2002: 296; see also Castro 2000: 3]. His partners in the private sector were “influenced by German ideas” [Klein and Luna 2017: 113] as well. And both the Brazilian and German models therefore trace their roots to an “apprentice tradition” [Castro and Althaus 1992: 7-9] that not only facilitates coordination among key stakeholders but tends to shelter vocational education from “prejudices against manual occupations” [*ibid.*: 9] that are simultaneously prevalent in public schools and a threat to the non-cognitive underpinnings of skill formation. “Unless the ethos of the school is conducive to this non-cognitive development,” explains Castro, “everything else is doomed to failure. Schools dominated by academic teachers (and their *ethos*) cannot convince their students that the trades they teach are serious endeavours” [Castro 1995: 20; see also Weinstein 1996, esp. Ch. 3; and Tomizaki 2008].

SENAI’s Teutonic roots are thus undeniable. It is hard to believe that the agency would have embraced the apprenticeship model in their absence, all the more so given the preponderant role of the US educational model in the region [Cunha 2012: 403-405]. But denial was not only a predictable response to the Vargas regime’s declaration of war on Germany in late 1942 but a systematic one. When the Ministry of Education began to recruit Swiss instructors in an effort to replace the now-discredited Germans, for example, they dispatched none other than Mange—who had already assumed the directorship of SENAI’s São Paulo office [Castro 1995: 19]—as an emissary, and by 1943 the German connection had been deliberately forgotten [Cunha 2012: 393-399]. When SENAI joined forces with Mercedes-Benz to open a school for skilled autoworkers in 1957, therefore, they did so anonymously, leaving their name off the diplomas until at least the mid-1960s—and off the school itself until 1984 [Tomizaki 2008: 73-74].

German donors and the diffusion of vocational education in Latin America

The end of World War II ushered in a volatile new phase of German-Latin American relations. On the one hand, Germany entered the

postwar era defeated, discredited, and divided. Every Latin American country but Chile had eventually joined the Allied Powers, and even Chile had broken diplomatic relations with Germany in 1943.⁷ Germany therefore had a good deal of diplomatic work to do in the region. On the other hand, the war accelerated the pace of import-substituting industrialization [Hirschman 1968] and, in so doing, induced demand for skilled labor. So the Germans suddenly found themselves with a diplomatic opportunity as well.

After all, Germany had earned a reputation for engineering and craftsmanship by building schools throughout the region during the Second Reich [von Gleich 1968: 23; Herwig 1986: 52], and it knew it could put that reputation to work by delivering technical assistance designed to help Latin American countries meet their needs for skilled labor in the postwar era. Between the mid-1950s and mid-1960s, therefore, the Federal Republic of Germany (FRG) helped develop 26 vocational schools in 14 Latin American countries and stipulated that they “be turned over to native administration after a suitable period of operation” [von Gleich 1968: 78].

The Escuela Técnica Colombo-Alemana (Colombian-German Technical School, or ETECA) offers an excellent example. The school was established by German donors in 1960 in an effort to train metalworkers in Barranquilla, and immediately earned a reputation for high quality pedagogy. While the Colombian National Training Service (*Servicio Nacional de Aprendizaje*, or SENA) would assume legal responsibility for ETECA in 1965, in keeping with the letter of the donation and the spirit of “self-help” [von Gleich 1968: 78] common to German donors, the Colombians would continue to rely upon German engineers until 1970, when they would at long last recruit local instructors backed up by ad hoc consultants from Germany [SENA 1977: 77; Cuervo 2010].

Germany’s effort to foster self-help among the Colombians worked, and by the mid-1980s the center would play host to representatives of more than a dozen Latin American countries and be portrayed as a veritable model of south-south collaboration [Cuervo and Steenwyk 1986: 82]. But the autonomy of SENA’s efforts, and the corresponding depth of self-help, should not be exaggerated, for their visits were *underwritten* by German donors, among others, and thus served to

⁷ Only Brazil sent troops to fight in the war, the Italian front. in the form of an expeditionary force sent to

underscore the persistent, if at times hidden, German foundations of the allegedly Latin American model of vocational training.

Nor is the example isolated. On the contrary, Germany has been supporting SENAI's efforts to help SENATI build a Center for Environmental Technologies in Peru [GIZ 2013; ILO 2013b; SENAI 2012; SENATI 2013]; the National Professional Promotion Service (Servicio Nacional de Promoción Profesional, or SNPP) train middle managers in Paraguay [SENAI 2008: 49; Severo 2012: 7]; and cognate institutions train thousands of workers in dozens of countries in Latin America annually [Amorim et al. 2013: 35; as well as Ducci 1997; Stockmann 1999; Trollo 2012]. The German government has also joined forces with VTIs and German multinationals like Siemens and Bosch in their efforts to encourage the spread of new techniques and technologies (e.g., computerized manufacturing and Industry 4.0) in the Andean countries [SENATI 2016; Revista SENATI 2018].

The point, however, is not simply the breadth but the *opacity* of the German efforts. By portraying their interactions as examples of south-south cooperation, after all, Latin American VTIs not only take credit for ideas and activities that build on decades of bilateral and triangular German support [see, e.g., Carrillo and Neto 2013: 88] but exaggerate the plausibility of *purely* southern solutions to world poverty.

German practices and their adaptation to Latin American reality

Of course, the opposite sin is no less costly. Institutions are not *easily* transferred, and the Latin American VTIs have not simply transplanted the German dual system into their native soils but have used institutions that are loosely modeled on their German (and Teutonic) forerunners to experiment with a variety of different delivery mechanisms. The pre-employment and in-service training they offer is therefore administered by private firms and third-party providers, as well as their own centers, and their institutional role is therefore better described as “provider-cum-regulator” than “provider.” For instance, SENA in Colombia, INA in Costa Rica, and INFOTEP in the Dominican Republic offer “accreditation programmes for third-party training services and in this way, incorporate into the training courses on offer up-to-date contents with the same quality as those applied by State-run vocational training institutes” [Casanova 2013: 14; see also Jaramillo 2013]. Other VTIs offer private firms with approved in-house training programs tax breaks or “train the trainers” [Aring et al. 1996: 57] in an effort to keep their knowledge and skills up to date. And many have adapted the dual system

to the tropics and subtropics by developing workarounds like the sequential, rather than simultaneous, provision of theoretical and practical training [Castro 2007: 9].

According to the International Labour Office, the best known “combination models are those coming from Germany, Switzerland and Austria” [ILO CINTERFOR 2013: 73], and they have been adapted to the local context by VTIs like SENA, SENATI, SENAI, INA, and INFOTEP. But the S&I institutions have frequently had the direct support of German donors and consultants in doing so [see, e.g., Gallart *et al.* 2003; INSAFORP-AECI 2006; Castro 2007; Araya Muñoz 2008], and their efforts thus speak less to the authenticity of the purportedly Latin American model of vocational education than to the persistent, as well as “overwhelming” [Castro 2007: 3], influence of German educational ideas and institutions in the region.⁸

INFOTEP provides an example of both the importance of German support and the adaptation of the dual system to the Latin American reality. After all, the Dominican VTI began to develop a dual training program with German financial and technical assistance in the mid-1980s, less than a decade after the country’s democratic transition, and graduated the first of more than 6,000 apprentices in 1990, when 53 industrial and automotive mechanics finished the program [Labarca 1999: 308-10; see also Confederación Patronal de la República Dominicana 2001].

But the Dominicans immediately encountered four barriers that would necessitate adjustments to the German model. First, they discovered that small and mid-sized firms in the Dominican Republic lacked the financial and technical wherewithal to take on apprentices, and thus shifted their focus from the smaller firms that had been the backbone of the dual system in Germany [Thelen 2004] to their larger counterparts [Labarca 1999: 330; and INFOTEP 2010: 140-143]. Second, they found that the larger firms were not interested in adolescent apprentices, and thus shifted their recruiting targets from 14-22 year olds to 16-25 year olds [cf. INFOTEP 2010: 60; INFOTEP 2012a: 15]. Third, they found that many of their recruits lacked basic literacy and numeracy, and thus developed compensatory programs in conjunction with the Ministry of Education [Labarca 1999: 306-7]. And, finally, they realized that they lacked a critical mass of skilled workers to mentor apprentices, and

⁸ Brazil’s recent announcement that SENAI would build 24 applied research and development centers modeled on Germany’s

Fraunhofer Institutes provides another example. See, e.g., Costa 2013 and Franco 2013.

thus created a complementary program to train master technicians for the job [Labarca 1999: 310].⁹

The result has been a dramatic expansion in participation and training. In fact, the dual program now graduates hundreds—rather than dozens—of apprentices a year in a large and growing array of specialties [Ministerio de Economía 2011: 161; INFOTEP 2012b: 55; Ministerio de Trabajo 2012: 16; UNCTAD 2012: 36]. The vast majority wind up with desirable jobs in their chosen fields and recommend the program without reservation [Labarca 1999: 309; INFOTEP 2012a: 36; INFOTEP 2012b: 56]. And the Dominican experience thus implies not only that the German model can indeed be broken down into discrete bits and pieces for export—contra Fukuyama—but that German donors have been central to the process.¹⁰

Quantitative analysis

I have traced the roots of the Latin American approach to vocational education to Germany and identified three distinct transmission paths: *imitation* by Latin Americans of German origin or descent; *propagation* by German donors, diplomats, and investors; and *adaptation* by the former with the support of the latter. Did the German legacy leave a mark on the statistical record? I address the question by looking for a systematic relationship between Latin American attitudes toward Germany, on the one hand, and approaches to vocational education, on the other, with the help of event history models that have typically been used to evaluate “the effect of global events or linkages on the adoption of policies and institutional structures by nation-states” [Schneiberg and Clemens 2006: 200]. However, I treat the results not as estimates of causal effects but as “relatively simple but rich and precise descriptions of patterns” [Berk 2004: 244] in the data. If there is a causal interpretation of the results it must come from the full array of qualitative and

⁹ The material on the Dominican Republic draws upon an interview generously granted by Severino Peña Villa, Director of dual training at INFOTEP, on July 5, 2012, in addition to the cited sources.

¹⁰ The Dominican Republic also provides an example of collective skill formation in the era of globalization. In the late 20th century, the island nation’s apparel and footwear exporters faced potentially devastating

competition from Central America and Asia. They hoped to upgrade their human capital in an effort to compete, but were concerned that their newly trained workers would simply be hired away by their neighbors. They thus confronted a classic collective action problem. With the help of INFOTEP, however, they were able to develop a collective training program that resolved the dilemma and facilitated the survival of the industry [Schrank 2011].

quantitative data, as well as the theory behind them, and not the “magic” [Freedman 1987: 209] of the statistical estimates.

The population of interest includes all 18 independent and non-communist countries of Spanish and Portuguese speaking Latin America, and the event in question is the formation of a national vocational training institution [Ducci 1991, Annex 1]. The units of analysis are “country-years,” beginning in 1940 when Latin American polities are first believed to be “at risk” of establishing VTIs, and ending with the establishment of the Salvadoran Institute for Professional Training (*Instituto Salvadoreño de Formación Profesional*, or INSAFORP) in 1993. By 1993, every country in Latin America had established a national VTI, and the data are therefore uncensored.

German influence in Latin America derived from a combination of demographic, economic, and cultural factors [von Gleich 1968; Grabendorff 1993-1994; Penny 2013], and data on most are at best incomplete.¹¹ But Albrecht von Gleich portrays the “order in which relations were broken off and war declared” as a reflection of the “attitude of the various Latin American countries toward Germany” [von Gleich 1968: 19] in the early 1940s. Von Gleich [1968: 23] and Glenn Penny note that German ties to Latin America “persisted in many ways through the radical political ruptures that dominate our historiography” [Penny 2013: 365]. I therefore create an ordered ranking ranging from 1 (in the four countries that declared war on December 11, 1941) to 14 (in Chile, the lone neutral country).¹²

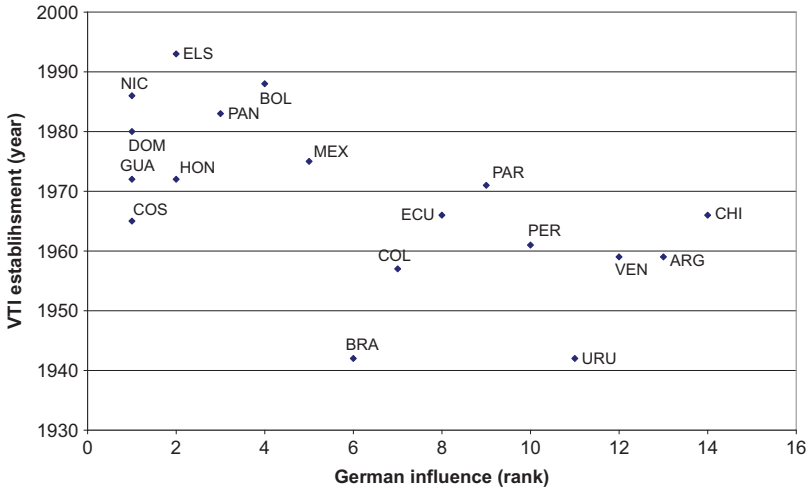
Figure 1 plots the year of VTI establishment by the indicator of German influence for the 18 Latin American countries and reveals a pronounced negative relationship. In fact, the bivariate correlation between the indicator of German influence and the year of VTI establishment is -0.61 ($p < 0.01$). But the possibility of spuriousness looms large, especially in light of the clustering of countries by size and region. While the larger, South American countries had closer ties to Germany, and would thus have been expected to deploy VTIs more rapidly in light of the historical record, they also industrialized faster, and therefore had more need for (and capacity to train) skilled labor. I therefore incorporate three control variables into the event history models.

¹¹ For instance, I could find estimates of the German immigrant populations in 10 of 18 Latin American countries in the 1940s, and similarly incomplete data on German investment.

¹² The indicator not only has face validity but has a significant positive relationship with

a number of indicators of German private sector influence in the region, including the presence and size of the German chamber of commerce and the number of German firms blacklisted by the US during the war. Results available from author on request.

FIGURE 1
VTI establishment by German influence



Industrialization

Gustavo Márquez holds that the S&I institutions were “part and parcel of the import substitution industrialization (ISI) strategy followed by most countries in the region until the early eighties” [Márquez 2001: 9; see also Weinstein 1996; Castro 1998], and I therefore control for the intensity of industrialization by including an indicator of iron and steel production per capita (in millions for ease of presentation) derived from the Correlates of War project data on National Material Capabilities [see Singer 1987].

Education

Experts have long debated whether general education and vocational education are complements, substitutes, or unrelated to each other [see, e.g., Bowman 1988], and I therefore control for the breadth of general education—with no strong prior as to the direction of the relationship—by including an indicator of the adult literacy rate that is unfortunately available on a decennial rather than annual basis [Astorga *et al.* 2005].

TABLE 3
Summary statistics

Variable	Mean	Standard deviation	Minimum	Maximum
<i>Industrialization</i>	4.4	14.0	0	86.5
<i>Education</i>	55.6	16.5	24	88
<i>Democratization</i>	-2.4	5.3	-9	10
<i>German influence</i>	4.8	4.2	1	14

Summary statistics calculated on the basis of country-years prior to failure (or VTI establishment); $n = 517$.

Democratization

Regina Galhardi identifies an affinity between vocational education in Latin America and “the democratisation of the region and the emergence and strengthening of organised civil society” [Galhardi 2002: 3; see also Busemeyer and Trampusch 2012: 8], and I therefore control for the level of democracy with the Polity indicator obtained from the Polity IV project [Marshall and Jaggers 2013].¹³

While the control variables are admittedly imperfect, they should capture differences in social and economic development between the region’s wealthier and poorer countries and ensure a more robust test of the effects of German influence. Table 3 includes summary statistics.

The distributional assumptions underpinning most event history models are hard to evaluate in the absence of strong theory and large sample sizes [Blossfeld and Rohwer, 2002: 230], and I therefore analyze the data by means of an alternative—the Cox proportional hazard model—that makes fewer distributional assumptions and “dominates applied work in the social and life sciences” [Beck, Katz and Tucker, 1998: 1266].¹⁴

By way of clarification, the model treats the probability of VTI establishment—given that none has been established previously—as a function of industrialization, education, democratization, and German influence. The results are contained in Table 4.

German influence has a significant positive effect on VTI formation. A one-unit increase in the influence index is associated with an 18% increase in the hazard of VTI formation, and a standard deviation increase is

¹³ Polity codes countries “on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy)” [Center for Systemic Peace 2018].

¹⁴ Murillo and Schrank [2005: 980] provide a more detailed discussion of event history models in small (national) samples.

TABLE 4
Cox models of VTI establishment in 18 Latin American countries, 1940-1993

Variable	Haz ratio	Robust SE	Z	P> z	Lower (95)	Upper (95)
<i>Industrialization</i>	0.99	0.012	-0.75	0.454	0.965	1.016
<i>Education</i>	1.02	0.017	1.11	0.269	0.986	1.052
<i>Democratization</i>	1.09	0.059	1.61	0.108	0.981	1.212
<i>German influence</i>	1.18	0.074	2.61	0.009	1.041	1.333

N of countries = 18; N of country-years = 535. Models are estimated with the Efron method for tied failures and robust standard errors; tests of the proportionality assumption are available from the author on request. Log pseudolikelihood = -30.598506; Wald $\chi^2(4) = 12.08$; Prob > $\chi^2 = 0.0167$.

associated with a doubling of the hazard, or the risk of VTI formation in a country that lacks a VTI, in the following year (i.e., $1.18^{4.2} = 2.0$). But the control variables fail to reach statistical significance and, in the case of industrialization, are incorrectly signed. The results are thus consistent with the idea that German influence is the key driver of vocational education in Latin America.¹⁵

Conclusion

Latin American VTIs have been widely portrayed as “homegrown” [Trollo 2012] or “southern grown” [Kwak 2013: 47] success stories. But the evidence I have adduced suggests that their roots lie in Germany, and that they continue to receive support from their German forebears. Are celebratory portraits of the VTIs uniquely ahistorical? Unfortunately, the answer is “no,” for in their haste to “celebrate the local” [Kiely 2000:

¹⁵ The results are not only robust to a variety of specifications but are consistent with a model that treats the number of German schools per capita (in millions) in 1905 as an alternative proxy for German influence as well as a number of less demanding tests. For instance, half of the 14 countries that played host to a German vocational school in 1965 had already established a national VTI,

whereas none of the four countries that lacked a German vocational school had done so. The differences are significant at the 10% level under either a X^2 test or the mid-p value approach to Fisher’s exact test for small samples recommended by Alan Agresti among others [see Agresti 2002: 20]. Full results available from author on request.

1068; Bernstein 2006: 59], development theorists have systematically ignored or misinterpreted the histories of myriad institutions and polities. Consider, for example, Edgardo Campos and his colleagues at the World Bank. While they trace the East Asian “miracle” to “home grown approaches” [Campos *et al.* 2013: 2], and invoke books by Chalmers Johnson, Alice Amsden, Stephan Haggard, and Robert Wade by way of support, they ignore the fact that all four authors give foreign models prominent positions in their interpretations of Asian success. “Japan looked to the United States and Europe,” explains Wade. “Taiwan and Korea look more to Japan, with the perception that they are descending the same stretch of the river (in the Japanese metaphor) as Japan did fifteen to twenty-five years ago” [Wade 1990: 334].¹⁶

The relevant question, therefore, is not whether developing countries should import and adapt foreign models but which models are most likely to bear fruit under what conditions. The answer to that question offers insight into the systematic amnesia that is overtaking the development policy community today, for many—if by no means all—of the most successful models are found in decidedly unattractive polities including not only Nazi Germany but fascist Japan as well. In fact, Johnson notes that his book on Japanese industrial policy, *MITI and the Japanese Miracle*, has frequently been portrayed as a thinly veiled “defense of fascism” [Johnson 1999: 51], and Atul Kohli reminds us that the *Estado Novo* declared by Vargas eventually “came to resemble its fascist counterparts in Europe” [Kohli 2004 388–389], in part due to the influence of “German and Italian immigrants.”

But the problem is not limited to imports with unsavory roots. While institutions that originated in Nazi Germany are for obvious reasons *particularly* tainted [Reinman 2000: 233; Auer 2001: 14], they arguably differ in degree—rather than kind—from institutions more generally. Policymakers have also been known to repackage policies and programs that have foreign but democratic origins, for example, in order to take political credit or deflect nationalist hostility [Linden 2009: 105] and the originality of their efforts cannot be taken for granted either. In fact, the very notion of an “original” or “authentic” institution may well be an academic construct; in a world of trade, travel, war, and immigration, institutions are in constant motion and dialogue, their level of “authenticity” is a matter of degree (and perhaps type) rather than kind, and the

¹⁶ See also Johnson [1982: 106] on the direct introduction of “German precedents” in Japan; Amsden on Korea’s “enviable position” [1989: 235] as a former colony and

student of Japan; and Haggard [1990: 52] on “Japanese and American legacies” in Korea in addition to Wade.

comparative historical sociologist's job is in part to unearth their histories.¹⁷

What are the broader implications of my analysis? I will briefly discuss three important lessons. First, the search for homegrown or southern grown development policies is at best futile and at worst misguided. Institutions are among the few northern products that developing countries can—at least theoretically—import for free [Romer 1993]. Sometimes they transfer seamlessly. Other times they demand adaptation. And often they refuse transfer outright. But the idea that developing country policymakers can readily differentiate foreign and domestic institutions, and should systematically turn their backs on the latter, is preposterous. The real questions are “which,” “when,” and “how,” not “whether.”¹⁸

Second, the broader literature on “models of capitalism” [Crouch 2005] is equally vulnerable. After all, the model builders in question [Hall and Soskice 2001; Lalenis *et al.* 2003; LaPorta *et al.* 2008; Schneider 2013] have at times implied that institutions are “hermetically sealed” and “fixed” [Crouch 2005: 451]. However, the evidence I have adduced implies cross-fertilization and learning, and thus counsels for interpretations that take “translation, hybridization, and recombination” [Schneiberg and Clemens 2006: 218] into account—including both Thelen’s sense that the original German model has survived neither by inertia nor inflexibility but by “ongoing, active adaptation to new problems” [Thelen 2007: 248] and revisionist accounts that come from within the “comparative capitalism” literature more generally [see, e.g., Jackson and Deeg 2008: 554].¹⁹

And, finally, the literature on “translation, hybridization, and recombination”—which is to say the literature on social change—needs to recognize that causality need not flow “from big to small” but can sometimes flow “from small to large, from the arbitrary to the general, from the minor event to the major development” [Abbott 1988: 173; see also Przeworski 2004: 184]. While the Germans have typically been portrayed as minor players in Latin American history, they established

¹⁷ My favorite example is the idea of manufacturing extension imported from Japan by the Clinton administration, for the Japanese had originally developed the idea after importing *agricultural* extension from the US [Shapira 2008]. Is manufacturing extension a direct Japanese import or a modified US export?

¹⁸ A recent essay by Lant Pritchett [2013], one of the leading theorists of the recourse to the local in development policymaking, seems

to reach a similar conclusion. Perhaps, then, the worm has turned.

¹⁹ Steinmetz correctly notes that “metropolitan practices are often fundamentally transformed by colonial and imperial contexts” [Steinmetz 2016: 107]. However, Germany’s Latin American efforts fail to meet his definition of empire [Steinmetz 2014: 79], the Second Reich’s ambitions notwithstanding [Herwig 1986].

institutions that have come to play a “major role” [Cuervo and Steenwyk 1986: 5; Castro 1999: 47] in the region’s economies—and could go on to play an even more “major role” [Sturgeon *et al.* 2013: 67] if they continue to evolve as planned. We would therefore do well to recognize that “small numbers” can translate into “great impact” [Buchenau 2001]—not only in Latin America but beyond.

REFERENCES

- ABBOTT Andrew, 1988. “Transcending General Linear Reality,” *Sociological Theory*, 6 (2): 169–186.
- AGRESTI Alan, 2002. *Categorical Data Analysis* (New York, John Wiley & Sons).
- ALLEN Christopher, 2004. “Ideas, Institutions and the Exhaustion of Modell Deutschland?,” *German Law Journal*, 5 (9): 1133–1154.
- AMORIM Anita, *et al.*, 2013. *South-South Cooperation and Decent Work: Good Practices* (Geneva, ILO).
- AMORIM Anita *et al.*, 2013. *South-South Cooperation and Decent Work: Good Practices* (Geneva, ILO).
- AMSDEN Alice, 1989. *Asia’s Next Giant: South Korea and Late Industrialization* (Oxford, Oxford University Press).
- ARAYA MUÑOZ Isabela, 2008. “La Formación Dual y Su Fundamentación Curricular,” *Revista Educación*, 32 (1): 45–61
- ARING Monika *et al.*, 1996. *Best Practice Compass to Workforce Development* (Washington, USAID).
- ASSUMPÇÃO-RODRIGUES Marta, 2013. “Skill Formation, Governance, and Democracy in Brazil: The State of the Art of a Public Policy,” *Helen Kellogg Institute for Public Policy, Working Paper 390*, University of Notre Dame, Notre Dame, Indiana.
- ASTORGA Pablo *et al.*, 2005. “The Standard of Living in Latin America During the Twentieth Century,” *Economic History Review*, LVIII: 765–796.
- ATCHOARENA David, 1996. “Financing Vocational Education: Concepts, Examples and Tendencies,” in *UNESCO, Financing Technical and Vocational Education: Modalities and Experiences* (Berlin, UNESCO/UNEVOC: 27–52).
- AUER Marietta, 2001. “‘Good Faith’ and its German Sources: A Structural Framework for the ‘Good Faith’ Debate in General Contract Law and under the Uniform Commercial Code,” *LLM Paper*, Harvard Law School, May.
- BECK Thorsten *et al.* 2003. “Law and finance: why does legal origin matter?” *Journal of Comparative Economics*, 31: 653–675.
- BECK Nathaniel, KATZ and TUCKER, 1998 “Taking time seriously: Time-series-cross-section analysis with a binary dependent variable,” *American Journal of Political Science*, 42: 1260–1288.
- BERK Richard, 2004. *Regression Analysis: A Constructive Critique* (Beverly Hills, Sage).
- BERKOWITZ Daniel *et al.* 2003. “Economic development, legality, and the transplant effect,” *European Economic Review*, 47: 165–195.
- BERNSTEIN Henry, 2006. “Studying Development/Development Studies,” *African Studies*, 65 (1): 45–62.
- BERTUCCI Mariano, 2015. “Review of Latin America’s New Era of Regionalism, edited by Andrew Cooper *et al.*,” *Americas Quarterly*, 9 (1): 108.
- BLACK Cyril, 1975. “Russian History in Japanese Perspective: An Experiment in Comparison,” *Jahrbücher für Geschichte Osteuropas*, Neue Folge, Bd. 23, H. 4: 481–488.
- , 1978. “Japan and Russia: Bureaucratic Politics in a Comparative Context,” *Social Science History*, 2 (4): 414–426.
- BLOSSFELD Hans Peter and Goetz ROHWER, 2002. *Techniques of event history analysis: New approaches to causal analysis* (Mahwah NJ, Lawrence Erlbaum).
- BLOSSFELD Hans Peter and Reinhard STOCKMANN, 1998–1999. “Guest Editors’ Introduction: The German Dual System in Comparative Perspective,” *International Journal of Sociology*, 28 (4): 3–28.
- BOWMAN Mary Jean, 1988. “Links between General and Vocational Education: Does the One Enhance the Other?,” *International Review of Education*, 34 (2): 149–171.

- BUCHENAU Jurgen, 2001. "Small Numbers, Great Impact: Mexico and Its Immigrants, 1821-1973," *Journal of American Ethnic History*, 20 (3): 23-49.
- BUSEMEYER Marius and Christine TRAMPUSCH, 2012. "The Comparative Political Economy of Collective Skill Formation," in M. Busemeyer and C. Trampusch, eds, *The Political Economy of Collective Skill Formation* (Oxford, Oxford University Press: 3-38).
- CABALLERO TAMAYO Xavier, 1969. "The ILO and Development in the Americas," *International Labour Review*, 100: 505-550.
- CAMPOS Daniela de, 2013. "O Ensino Profissional do Rio Grande do Sul No Início do Século XX," *Paper prepared for presentation at 2014 CEFET MG meeting*.
- CAMPOS J. Edgardo et al., 2013. "Escaping the Capability Trap: Turning 'Small' Development into 'Big' Development," *World Bank Policy Research Working Paper*, 6717, December.
- CARRILLO Susana and Napoleão DEQUECH NETO, 2013. "Boosting Vocational Training and Skills Development: A Case of Triangular Cooperation among Brazil, Germany, and Peru," *Integration & Trade*, 36 (17): 85-92.
- CARTON Michel and Sobhi TAWIL, 1997. "Introduction to the Open File," *Prospects: Quarterly Review of Review of Comparative Education*, XXVII (1): 19-28.
- CASANOVA Fernando, 2013. *The employment situation in Latin America and the Caribbean: Challenges and innovations in labour training* (Santiago: CEPAL).
- CASSIDY Eugene, 2015. *Germanness, Civilization, and Slavery: Southern Brazil as German Colonial Space (1819-1888)*, PhD dissertation, University of Michigan.
- CASTRO Alexandre De Carvalho, 2014. "Mental test implementation in the National Technical School in the period between 1942 and 1959: An analysis from the questioning of the notions of center and periphery," *Universitas Psychologica*, 13 (5): 1729-1738.
- CASTRO Claudio de Moura, 1995. *Training policies for the end of the century* (Paris, UNESCO).
- 1998. "The Stubborn Trainers vs the Neo-liberal Economists: Will Training Survive the Battle?," *Working paper* (Washington: IDB).
- 1999. "Vocational and Technical Training: Setting the Record Straight," *Prospects*, XXIX: 37-53.
- 2000. *How Brazil strengthens its skills: strengths and weaknesses*, Unpublished manuscript.
- 2002. *Formación profesional en el cambio de siglo* (Montevideo, OIT/CINTERFOR).
- 2007. "Latin America: the Battle between Borrowing and Creating," *Prospects*, 27: 109-122.
- 2008. Is training in developing countries different from training in developed countries?," UNEVOC Forum. Supplement to UNESCO-UNEVOC Bulletin, 14 (April): 1-4.
- 2009. "Do training institutions learn from experience?," *Paper prepared for the NOR-RAG Conference on Policy transfer or policy learning: Interactions between international and national skills development approaches for policy making Hosted by the Graduate Institute of International and Development Studies Geneva*, 25-26 June.
- CASTRO Claudio de Moura and Claudio ALFTHAN, 1992. *Five Training Models* (Geneva, ILO, Occasional Paper, 9).
- CENTER FOR SYSTEMIC PEACE, 2018. *Polity IV, Annual Time-Series, 1800-2018* [<http://www.systemicpeace.org/inscrdata.html>].
- COHN Samuel, 2012. *Employment and Development Under Globalization: State and Economy in Brazil* (New York, Palgrave Macmillan).
- CONFEDERACIÓN PATRONAL DE LA REPÚBLICA DOMINICANA, 2001. "Confederación Patronal de la República Dominicana en el INFOTEP," Presented at the OIT/CINTERFOR Reunión Técnica sobre Los Empleadores y la Formación Profesional en América Latina y el Caribe, Santa Cruz de la Sierra, Bolivia, 25-27 April 2002.
- COSTA Gilberto, 2013. "Brasil tenta na Alemanha liderança em competição na área de educação profissional," *Agência Brasil*, 30 June.
- CROUCH Colin. 2005. "Models of Capitalism," *New Political Economy*, 10 (4): 439-456.
- CUERVO Amalia and Ned van STEENWYK, 1986. "Colombia's Servicio Nacional de Aprendizaje: A Qualitative Analysis of a Training System," USAID, August.
- CUERVO Felipe, 2010. "Aprendiendo de las fundaciones," *La República*, 30 June.
- CULPEPPER Pepper, 2003. *Creating Cooperation: How States Develop Human Capital in Europe* (Ithaca, Cornell University Press).

- CUNHA Luiz Antônio, 2012. "Professores e modelos estrangeiros para a educação profissional brasileira (1936/1945)," *Interseções*, 14 (2): 372–407.
- DE FERRANTI David *et al.*, 2003. *Closing the Gap in Education and Technology* (Washington, World Bank).
- DE JONG Martin *et al.*, 2007. "Cross-National Policy Transfer to Developing Countries: Prologue," *Knowledge, Technology, & Policy*, 19 (4): 3–8.
- DE JONG Martin and Susan STOTER, 2009. "Institutional Transplantation and the Rule of Law," *Erasmus Law Review*, 2 (3): 311–330.
- DORE Ronald, 1973. *British Factory-Japanese Factory: The Origins of National Diversity in Industrial Relations* (Berkeley, University of California Press).
- DOUGHERTY Christopher, 1989. "The Cost Effectiveness of National Training Systems in Developing Countries," *Population and Human Resources Department Working Paper 171* (Washington, World Bank).
- DRAKE Keith, 1994. "Policy Integration and Cooperation: A Persistent Challenge," in *OECD, Vocational Education and Training for Youth: Towards Coherent Policy and Practice* (Paris, OECD: 143–168).
- DREZNER Daniel, 2009. "Review of Dani Rodrik, One economics, many recipes: globalization, institutions, and economic growth", *Cambridge Review of International Affairs*, 22 (1): 190–192.
- DUCCI María Angélica, 1991. *Vocational Training on the Threshold of the 1990s*, vol. 2. (Montevideo, ILO/CINTERFOR).
- , 1997. "New challenges to vocational training authorities: Lessons from the Latin American experience," *International Journal of Manpower*, 18 (1/2): 160–184.
- EDWARDS Sebastian, 2010. *Left Behind: Latin America and the False Promise of Populism* (Chicago, University of Chicago Press).
- EICHORST Werner *et al.*, 2012. "A roadmap to vocational education and training systems around the world," *Discussion Paper Series, Forschungsinstitut zur Zukunft der Arbeit*, 7110.
- ESCANHO Tatiana, 2015. "Reformation of the WHO and Social Determinants of Health are highlights at the South American Forum for International Cooperation," January 27.
- ESTÉVEZ-ABE Margarita, 2005. "Labor Markets, Public Policies and Gender Equality: The Varieties of Capitalism Perspective and Beyond," *Paper presented at the annual meetings of the American Political Science Association*, Washington, DC.
- EVANS Peter, 2004. "Development as Institutional Change: The Pitfalls of Institutional Monocropping and the Potentials of Deliberation," *Studies in Comparative International Development*, 38 (4): 30–52.
- FAST Travis William, 2016. "Varieties of Capitalism: A Critique," *Relations Industrielles/Industrial Relations*, 71 (1): 33–55.
- FAVELL Adrian, 2003. "Games without Frontiers? Questioning the Transnational Social Power of Migrants in Europe," *European Journal of Sociology*, 44 (3): 397–427.
- FECHTER Anne-Meike and Katie WALSH, 2010. "Examining 'Expatriate' Continuities: Postcolonial Approaches to Mobile Professionals," *Journal of Ethnic and Migration Studies*, 36 (8): 1197–1210.
- FERREIRA Laura Senna, 2016. "Processos de racionalização e novos desenhos identitários: a reestruturação da indústria da reparação automotiva e do ofício do mecânico," *Revista Sociedade e Estado*, 31 (1): 237–258.
- FINDLAY Eleide Abril Gordon, 1984. *Construindo Ferramentas E A Si Mesmos: Os Ferramenteiros Da Indústria Automobilística*, Tese submetida como requisito parcial para a obtenção do grau de mestre em Educação, Fundação Getúlio Vargas, Rio de Janeiro.
- FORTWENGEL Johann, 2017. "Understanding When MNCs Can Overcome Institutional Distance: A Research Agenda," *Management International Review*, 57: 793–814.
- FORTWENGEL Johann and Gregory JACKSON, 2016. "Legitimizing the apprenticeship practice in a distant environment: Institutional entrepreneurship through inter-organizational networks," *Journal of World Business*, 51: 895–909.
- FRANCO Pedro Rocha, 2013. "Inovação para ganhar mais competitividade," 2 July, Estado de Minas.
- FREEDMAN David, 1987. "A Rejoinder on Models, Metaphors, and Fables," *Journal of Educational and Behavioral Statistics*, 12 (2): 206–223.
- FRENCH John, 2010. "How the Not-So-Powerless Prevail: Industrial Labor Market Demand and the Contours of Militancy in Mid-Twentieth-Century São Paulo, Brazil," *Hispanic American Historical Review*, 90 (1): 109–142.
- FUKUYAMA Francis, 1995. *Trust: The Social Virtues and the Creation of Prosperity* (New York, Free Press).

- GALHARDI Regina, 2002. "Financing Training: Innovative Approaches from Latin America," *Paper prepared for the International IVETA 2002 Conference*, Mauritius, July 20-24.
- GALLART María Antonia *et al.*, 2003. *Tendencias de la educación técnica en América Latina Estudios de caso en Argentina y Chile* (UNESCO, Instituto Internacional de Planeamiento de la Educación).
- GASSKOV Vladimir, 1994. *Alternative schemes of financing training* (Geneva, ILO).
- GERSCHENKRON Alexander, 1962. *Economic Backwardness in Historical Perspective* (Cambridge, Harvard University Press).
- GIZ, 2013. "Developing an Environmental Technology Centre (CTA) in Peru: Triangular cooperation Brazil-Peru-Germany," [<https://www.giz.de/en/downloads/giz2014-en-zentrum-umweltechnologien-peru.pdf>].
- GOLDMAN Emily, 2006. "Cultural Foundations of Military Diffusion," *Review of International Studies*, 32 (1): 69-91.
- GRABENDORFF Wolf, 1993-1994. "Germany and Latin America: A Complex Relationship," *Journal of Inter-American Studies and World Affairs*, 35 (4): 43-100.
- HAGGARD Stephan, 1990. *Pathways from the Periphery: The Politics of Growth* (Ithaca, Cornell University Press).
- HALL Peter and David SOSKICE, 2001. *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford, Oxford University Press).
- HANNAN Damian *et al.*, 1996. "Cross-National Research on School to Work Transitions: An Analytical Framework," *OECD Secretariat*.
- HANUSHEK Eric, 2017. "Emulating Germany's Apprenticeship System Won't Make America Great Again," *World Post*, June 23.
- HARHOFF Dietmar and Thomas KANE, 1997. "Is the German Apprenticeship System a Panacea for the U.S. Labor Market?," *Journal of Population Economics*, 10 (2): 171-196.
- HELMKE Gretchen, 2010. "The Origins of Institutional Crises in Latin America," *American Journal of Political Science*, 54 (3): 737-750.
- HEMERIJCK Anton and Philip MANOW, 2003. "The experience of negotiated reforms in the Dutch and German welfare states," in B. Ebbinhaus and P. Manow, eds, *Comparing Welfare Capitalism: Social policy and political economy in Europe, Japan, and the USA* (London, Routledge: 217-238).
- HERRIGEL Gary, 1996. *Industrial Constructions: The Sources of German Industrial Power* (New York, Cambridge University Press).
- HERRIGEL Gary and Jonathan ZEITLIN, 2010. "Alternatives to Varieties of Capitalism," *Business History Review*, 84 (4): 667-674.
- HERTEL Shareen, 2019. *Tethered Fates: Companies, Communities, and Rights* (New York, Oxford University Press).
- HERWIG Holger, 1986. *Germany's Vision of Empire in Venezuela, 1871-1914* (Princeton, Princeton University Press).
- HIRSCHMAN Albert, 1968. "The Political Economy of Import-Substituting Industrialization in Latin America," *Quarterly Journal of Economics*, 82 (1): 1-32.
- HOCKENOS Paul, 2017. "Donald Trump Finally Found a German Thing He Likes," *Foreign Policy*, June 27.
- HOWES William, 1975. "Progressive Conservatism in Brazil: Oliveira Viana, Roberto Simonsen and the Social Legislation of the Vargas Regime, 1930-1945," PhD dissertation, University of Cambridge.
- HUNTINGTON Samuel, 1996. "The West Unique, Not Universal," *Foreign Affairs*, 75 (6): 28-46.
- IBARRARÁN Pablo and David ROSAS SHADY, 2009. "Evaluating the Impact of Job Training Programmes in Latin America: Evidence from IDB Funded Operations," *Journal of Development Effectiveness*, 1 (2): 195-216.
- IBARRARÁN Pablo, *et al.* 2019. "Experimental Evidence on the Long-Term Effects of a Youth Training Program," *Industrial and Labor Relations Review*, 72 (1): 185-222.
- IGNATIEFF Michael, 2014. "Comments in the Proceedings of the Annual Meeting (American Society of International Law)," *The Effectiveness of International Law*, vol. 108: 448-468.
- INFOTEP, 2010. *INFOTEP: 30 años de historias de triunfo* (Santo Domingo, INFOTEP).
- , 2012a. *Estudio de impacto de los egresados de la formación técnico profesional, en las modalidades: Formación Dual, Formación Itinerarios, Formación Continua en Centro, Formación de Maestros Técnicos y Validación Ocupacional* (Santo Domingo, INFOTEP).
- , 2012b. *Memoria Institucional: Períodos Constitucionales, 2004-2012* (Santo Domingo, INFOTEP).

- INSTITUTO SALVADOREÑO DE FORMACIÓN PROFESIONAL (INSAFORP) and AGENCIA ESPAÑOLA DE COOPERACIÓN INTERNACIONAL (AECI), 2006. *Proyecto Nacional Formación Ocupacional y Inserción Laboral*.
- INTERNATIONAL LABOUR OFFICE, 2013a. *South-South Cooperation and Decent Work: Good Practices* (Geneva, ILO).
- INTERNATIONAL LABOUR OFFICE, 2013b. "Brazil's Contribution to the ILO South-South and Triangular Cooperation Strategy, An Overview: 2011-2013," Geneva, ILO.
- INTERNATIONAL LABOUR OFFICE-CENTRO INTERAMERICANO PARA EL DESARROLLO DEL CONOCIMIENTO EN LA FORMACIÓN PROFESIONAL (INTER-AMERICAN CENTRE FOR KNOWLEDGE DEVELOPMENT IN VOCATIONAL TRAINING), 2013. CINTEFOR 50 Years (Geneva, ILO).
- JACINTO Claudio, 2008. "Training policies for disadvantaged youth in Latin America: Trends in institutional and learning approaches," *Bienale on Education in Africa Mozambique*, May 5-9.
- JACKSON Gregory and Richard DEEG, 2008. "Comparing Capitalisms: Understanding Institutional Diversity and Its Implications for International Business," *Journal of International Business Studies*, 39 (4): 540-561.
- JACOBY Wade, 2000. *Imitation and Politics: Redesigning Modern Germany* (Ithaca, Cornell University Press).
- JÄGER Matthias and Tobias BÜHRER, 2000. *Financing TVET* (Bern, SDC).
- JARAMILLO Miguel, 2013. "From Supply- to Demand-Led: Labour Training in Latin America," *ELLA Policy Brief*.
- JIMENEZ Emmanuel, et al., 1989. "National In-Service Training Programs in Latin America: An Economic Evaluation of Colombia's SENA," *Economic Development and Cultural Change*, 37 (3): 595-610.
- JOHNSON Chalmers, 1982. *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975* (Stanford, Stanford University Press).
- , 1999. "The Developmental State: Odyssey of a Concept," in Meredith WOO-CUMINGS, ed., *The Developmental State* (Ithaca, Cornell University Press: 32-60).
- KIELY Ray, 1999. "The Last Refuge of the Noble Savage: A Critical Assessment of Post-Development Theory," *European Journal of Development Research*, 11 (1): 30-55.
- , 2000. "Globalization: from domination to resistance," *Third World Quarterly*, 21 (6): 1059-1070.
- KLEIN Herbert and Francisco VIDAL LUNA, 2017. *Brazil, 1964-1985: The Military Regimes of Latin America in the Cold War* (New Haven, Yale University Press).
- KOGUT Bruce, 2012. "The Small World of Corporate Governance: An Introduction," in Bruce Kogut, ed., *The Small Worlds of Corporate Governance* (Cambridge, MIT Press: 1-52).
- KOHLI Atul, 2004. *State-Directed Development: Political Power and Industrialization in the Global Periphery* (Cambridge, Cambridge University Press).
- KUCZYNSKI Pedro-Pablo and John WILLIAMSON, 2003. *After the Washington Consensus: Restarting Growth and Reform in Latin America* (Washington, Peterson Institute).
- KWAK Jae Sung, 2013. "The Rising Importance of Triangular Cooperation in Asia-LAC Economic Relations," *Integration & Trade*, 36 (17): 39-52.
- LABARCA Guillermo, 1999. "Formación para el trabajo, entrenamiento y capacitación con participación de empresas en la República Dominicana," in G. Labarca, ed., *Formación y empresa: El entrenamiento y la capacitación en el proceso de reestructuración productiva* (Montevideo, OIT/CINTERFOR: 303-340).
- LALENIS Konstantinos, et al., 2003. "Families of Nations and Institutional Transplantation," University of Thessaly, Department of Planning and Regional Development, Discussion Paper Series, 9 (12): 249-272.
- LAMBACH Daniel and Tobias DEBIE, 2010. "State failure and state building," in Myriam Dunn Cavelty and Victor Mauer, eds, *The Routledge Handbook of Security Studies* (Oxford, Routledge: 159-168).
- LAPORTA Rafael, et al., 2008. "The Economic Consequences of Legal Origins," *Journal of Economic Literature*, 46 (2): 285-322.
- LEWIS Bernard, 1961. *The Emergence of Modern Turkey* (Oxford, Oxford University Press).
- LIMA Raquel Rodrigues, 2000. "Liceu Parobé: um instituto das artes e ofícios," *Arqtexto*, 0: 74-84.
- LINDÉN Tord Skogedal, 2009. *Whose idea? Family policy in Germany and Norway and the role of international organizations*, PhD Dissertation (University of Bergen).
- LINZ Juan, 1990. "Perils of Presidentialism," *Journal of Democracy*, 1 (1): 51-69.

- LIPSET Seymour Martin, 1994. "The Social Requisites of Democracy Revisited: 1993 Presidential Address," *American Sociological Review*, 59 (1): 1–22.
- MACHINEA José Luis, 2005. "Opening Remarks," *IMF-ECLAC Roundtable: Building Prosperity in Latin America and the Caribbean: Macroeconomic and Reform Priorities*, May 30, Santiago.
- MANZ Stefan, 2014. *Constructing a German Diaspora: The "Greater German Empire," 1871–1914* (New York, Routledge).
- MARINETTO Mike, 2005. "The Globalization Problematique: A Review Essay," *Sociology*, 39 (2): 371–379.
- MÁRQUEZ Gustavo, 2001. "Labour Training and Competitiveness in Latin America," *Twelfth International Forum on Latin American Perspectives organised jointly by the Inter-American Development Bank and the OECD Development Centre in co-operation with the Ibero-American Co-Operation Secretariat Madrid*, 10 and 12 November 2001.
- MARSHALL Monty and Keith JAGGERS, 2013 *Polity IV Project: Political Regime Characteristics and Transitions, 1800–2010* [<http://www.systemicpeace.org/polity/polity4.htm>].
- MERRYMAN John, 1996. "The French Deviation," *The American Journal of Comparative Law*, 44 (1): 109–119.
- MEYER-STAMER Jörg, 1997. *Technology, Competitiveness, and Radical Policy Change: The Case of Brazil* (London, Frank Cass).
- MIDDLETON John and Terry DEMSKY, 1988. *World Bank Investment in Technical Education and Training* (Washington, World Bank).
- MIDDLETON John and Adrian ZIDERMAN, 1997. "Overview: World Bank policy research on vocational education and training," *International Journal of Manpower*, 18 (1/2): 6–28.
- MIDDLETON John *et al.*, 1991. "Vocational and Technical Education and Training: A World Bank Policy Paper," *Population and Human Resources Department*, (Washington, World Bank, Working Paper 24).
- MINISTERIO DE ECONOMÍA, PLANIFICACIÓN Y DESARROLLO, 2011. *Plan Nacional Plurianual del Sector Público, 2011–2014* (Santo Domingo, Ministerio de Economía, Planificación y Desarrollo).
- MINISTERIO DE TRABAJO, 2012. *Memoria de Gestión, 2004–2012* (Santo Domingo, Ministerio de Trabajo).
- MISZTAL Barbara, 1992. "Must Eastern Europe follow the Latin American way?," *European Journal of Sociology*, 33 (1): 151–179.
- MORLINO Thomas, 2016. *The Quality of Democracies in Latin America* (Stockholm, International Institute for Democracy and Electoral Assistance).
- MURILLO M. Victoria and Andrew SCHRANK, 2005. "With a Little Help from My Friends: Partisan Politics, Transnational Alliances, and Labor Rights in Latin America," *Comparative Political Studies*, 38 (8): 971–999.
- NELSO Roy, 2009. *Harnessing Globalization: The Promotion of Nontraditional Foreign Direct Investment in Latin America* (University Park, Pennsylvania State University Press).
- OFFE Claus, 2000. "Civil society and social order: demarcating and combining market, state and community," *European Journal of Sociology*, 41 (1): 71–94.
- OIT-CINTERFOR (Organización Internacional del Trabajo-Centro Interamericano para el Desarrollo del Conocimiento en la Formación Profesional), 2017. *El futuro de la formación profesional en América Latina y El Caribe: Diagnóstico y lineamientos para su fortalecimientos* (Montevideo: OIT-CINTERFOR).
- ORTON J. Douglas and Karl WEICK, 1990. "Loosely Coupled Systems: A Reconceptualization," *Academy of Management Review*, 15 (2): 203–223.
- PARYONO Paryono, 2005. "A Cross-National Analysis of When and How Vocational Education is Offered" *SEAMO VOCTECH Journal*, December: 41–49.
- PENCE Katherine and Andrew ZIMMERMAN, 2012. "Transnationalism," *German Studies Review*, 35 (3): 495–500.
- PENNY H. Glenn, 2013. "Latin American Connections: Recent Work on German Interactions with Latin America," *Central European History*, 46: 362–394.
- PENNY H. Glenn and Stefan RINKE, 2015. "Germans Abroad: Respatializing Historical Narrative," *Geschichte und Gesellschaft*, 41 (April-June): 173–196.
- PORTES Alejandro, 2005. "Sociology in the Hemisphere: Past Convergencies and a New Middle-Range Agenda," in Charles Wood and Bryan Roberts, eds, *Rethinking Development in Latin America* (University Park, Pennsylvania State University Press: 27–52).

- , 2006. "Institutions and Development: A Conceptual Reanalysis" *Population & Development Review*, 32 (2): 233–262.
- PRATT Mary Louise, 1991. "Arts of the Contact Zone," *Profession* (Modern Language Association: 33–40).
- PRITCHETT Lant, 2013. "The Regulatory State Goes South in the South," in N. Dubash and B. Morgan, eds, *The Rise of the Regulatory State of the South* (Oxford, Oxford University Press: 225–234).
- PRITCHETT Lant and Michael WOOLCOCK, 2002. "Solutions when the Solution is the Problem: Arraying the Disarray in Development," (Washington, Center for Global Development, Working Paper 10).
- PRONKO Marcela, 2003. *Universidades del Trabajo en Argentina y Brasil: Una historia de las propuestas de su creación* (Geneva, ILO).
- PRZEWORSKI Adam, 2004. "The Last Instance: Are Institutions the Primary Cause of Economic Development?," *European Journal of Sociology*, XLV (2): 165–188.
- RAFIQUI Pernilla, 2009. "Evolving economic landscapes: why new institutional economics matters for economic geography," *Journal of Economic Geography*, 9: 329–353.
- RAMALHO José Ricardo, and Marco Aurélio SANTANA, 2002. "VW's Modular System and Workers' Organization in Resende, Brazil," *International Journal of Urban and Regional Research*, 26 (4): 756–766.
- RAMÍREZ Guerrero Jaime, 2002. "The Financing of Vocational Training in Latin America and the Caribbean," *Reference Paper for Inter-American Tripartite Seminar on Training, Productivity and Decent Work, Inter-American Research and Documentation Centre on Vocational Training*.
- REINMAN Mathias, 2000. "Transatlantic Models: Influences Between German and American Law," Unpublished talk given to the Korean Society of the Sociology of Law at Seoul National University on June 6.
- REVISTA SENATI 2016. "Primer Centro Tecnológico Bosch-SENATI Fue Inaugurado en El Perú" 78 (sgosto-septiembre): 8–10.
- REVISTA SENATI 2018. "Los trabajos del future que se necesitan hoy" 85 (febrero-marzo): 22–25.
- RINKE Stefan, 2013. "Germany and Brazil, 1870–1945: a relationship between spaces," *História Ciências, Saúde – Manuais*, 21 (1): 1–16.
- ROBALINO David et al., 2012. "Policy Framework: The Economic Rationale for Skills Development Policies," in Rita Almeida et al., *The Right Skills for the Job: Rethinking Training Policies for Workers* (Washington, World Bank: 49–66).
- RODRIG Dani, 2000. "Institutions for high-quality growth: What they are and how to acquire them," *Studies in Comparative International Development*, 35 (3): 3–31.
- , 2007. *One economics, many recipes: globalization, institutions, and economic growth* (Princeton, Princeton University Press).
- ROLAND Gérard, 2004. "Understanding Institutional Change: Fast-moving and Slow-Moving Institutions," *Studies in Comparative International Development*, 38 (4): 109–131.
- ROMER Paul, 1993. "Two Strategies for Economic Development: Using Ideas and Producing Ideas," *Proceedings of the World Bank Annual Conference on Economic Development* (Washington, World Bank).
- SABEL Charles et al., 2012. "Self Discovery as a Coordination Problem," in Charles Sabel, Andrés Rodríguez-Clare, Ernesto H. Stein, Ricardo Hausmann, Andrés Rodríguez-Clare, eds, *Export Pioneers in Latin America* (Washington DC, Inter-American Development Bank: 1–46).
- SCHMIDT Vivien, 2009. "Putting the Political Back into Political Economy by Bringing the State Back in Yet Again," *World Politics*, 61 (3): 516–546.
- SCHMITTER Philippe, 1971. *Interest Conflict and Political Change in Brazil* (Stanford, Stanford University Press).
- SCHNEIBERG Marc and Elisabeth S. CLEMENS, 2006. "The Typical Tools for the Job: Research Strategies in Institutional Analysis," *Sociological Theory*, 24 (3): 195–227.
- SCHNEIDER Ben Ross, 2013. *Hierarchical Capitalism in Latin America* (Cambridge, Cambridge University Press).
- SCHRANK Andrew, 2011. "Co-producing Workplace Transformation: The Dominican Republic in Comparative Perspective," *Socio-Economic Review*, 9 (2): 419–445.
- SEIDLER Valentin, 2014. "When Do Institutional Transfers Work? The Relation between Institutions, Culture and the Transplant Effect: the Case of Borno in North-eastern Nigeria," *Journal of Institutional Economics*, 10 (3): 371–397.
- SENA (SERVICIO NACIONAL DE APRENDIZAJE), 1977. *20 Años del SENA en Colombia* (Bogota, SENA).

- SENAI (SERVIÇO NACIONAL DE APRENDIZAGEM INDUSTRIAL), 2008. *Relatório 2007, a indústria faz e o SENAI capacita e desenvolve soluções inovadoras*, (Brasília, SENAI).
- , 2012. *SENAI—Actions for Sustainable Development* (Brasília, SENAI).
- SENATI (SERVICIO NACIONAL DE ADIESTRAMIENTO EN TRABAJO INDUSTRIAL [the National Service for Training in Industrial Employment]), 2013. *Tripartite Project: Center for Environmental Technologies* (Lima, SENATI).
- , 2016. “Primer Centro Tecnológico Bosch-SENATI Fue Inaugurado en El Perú,” 78 (August-September): 8–10.
- SEVERO Lucio, 2012. “Youth and Skills in Latin America: Strategies, Programmes, and Best Practices,” UNESCO. *Background paper for the Education for All Global Monitoring Report*.
- SHAPIRA Philip, 2008. “Putting Innovation in Place: Policy Strategies for Industrial Services, Regional Clusters, and Manufacturing SMEs in Japan and the United States,” *Prometheus*, 26 (1): 69–87.
- SHERMAN John, 2000. *Latin America in Crisis* (Boulder, Westview).
- SINGER J. David, 1987. “Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816–1985,” *International Interactions*, 14: 115–132.
- SKOCPOL Theda, 1979. *States and Social Revolutions* (Cambridge, Cambridge University Press).
- SKOCPOL Theda and Ellen Kay TRIMBERGER, 1977–1978. “Revolutions and the World Historical Development of Capitalism,” *Berkeley Journal of Sociology*, 22: 101–113.
- STEINMETZ George, 2005. “Return to Empire: The New U.S. Imperialism in Comparative Historical Perspective,” *Sociological Theory*, 23 (4): 339–367.
- , 2007. *The Devil’s Handwriting: Precoloniality and the German Colonial State in Qingdao, Samoa, and Southwest Africa* (Chicago, University of Chicago Press).
- , 2014. “The Sociology of Empires, Colonies, and Postcolonialism,” *Annual Review of Sociology*, 40: 77–103.
- , 2016. “Social fields, subfields, and social spaces at the scale of empires: explaining the colonial state and colonial sociology,” *Sociological Review Monographs*, 64 (2): 98–123.
- STOCKMANN Reinhard, 1999. “The Implementation of Dual Vocational Training Structures in Developing Countries: An Evaluation of ‘Dual Projects’ Assisted by the German Agency for Technical Cooperation,” *International Journal of Sociology*, 29 (2): 29–65.
- STURGEON Tim, et al., 2013. “Brazilian Manufacturing in International Perspective: A Global Value Chain Analysis of Brazil’s Aerospace, Medical Devices, and Electronics Industries,” unpublished report prepared for Brazil’s CNI.
- TANNER Lou, 2008. “Review of Forgotten Continent: The Battle for Latin America’s Soul, by Michael Reid,” *Virginia Quarterly Review*, 84 (2): 260.
- TEUBNER Gunther, 2001. “Legal Irritants: How Unifying New Law Ends Up in New Divergences,” in P. HALL and D. SOSKICE, eds, *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford, Oxford University Press, ch. 13).
- THELEN Kathleen, 2004. *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan* (Cambridge, Cambridge University Press).
- , 2007. “Contemporary challenges to the German vocational training system,” *Regulation and Governance*, 1: 247–260.
- THELEN Kathleen and Marius Busemeyer, 2012. “Institutional Change in German Vocational training: From Collectivism toward Segmentalism,” in M. Busemeyer and C. Trampusch, eds, *The Political Economy of Collective Skill Formation* (Oxford, Oxford University Press: 68–100).
- THOMAS Joe, 2013. *South-South Cooperation. Sixth Asian and Pacific Population Conference, 16–20 September 2013* (Bangkok, United Nations Conference Center).
- TOMIZAKI Kimi, 2008. “Socializar para o trabalho operário O Senai-Mercedes-Benz,” *Tempo Social, revista de sociologia da USP*, 20 (1): 61–94.
- TRAMPUSCH Christine, 2008. “Employers, the State, Trade Unions and the Politics of Institutional Change. Varieties of Institutional Change in the Vocational Education and Training Regimes in Austria, Germany and Switzerland,” *Unpublished paper*.
- TROLLO Pete, 2012. “Setting its own course, Brazil foreign aid expands and evolves,” *DevEx*, July 9.
- UNCTAD (UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT), 2010. *Report of the High-level Committee on South-South Cooperation. Sixteenth session*

- (4 February 2010, New York, United Nations).
- , 2012. *Examen de las Políticas de Ciencia, Tecnología e Innovación: República Dominicana* (New York).
- UNDP (UNITED NATIONS DEVELOPMENT PROGRAMME), 2009. *Enhancing South-South and Triangular Cooperation* (New York, UNDP).
- , 2011. *Sharing Innovative Experiences: Successful Social Protection Floor Experiences* (New York, UNDP).
- UNESCO (UNITED NATIONS ECONOMIC, SOCIAL, AND CULTURAL ORGANIZATION), 2013. *UNESCO International Bureau of Education* (Geneva) [<https://unesdoc.unesco.org/ark:/48223/pf0000223058>].
- UNIDO (UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION), 2017. *Skills Gap Assessment in Six Priority Sectors of Nigeria Economy* October, (Vienna).
- VARGAS ZÚÑIGA Fernando, 2017. *25 Hechos Sobre la Formación Profesional en América Latina, el Caribe, y España* (Montevideo, OIT/CINTERFOR).
- VON GLEICH Albrecht, 1968. "Germany and Latin America," *Rand Memorandum* 5523-RC, June.
- WADE Robert, 1990. *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton, Princeton University Press).
- WANG Xiaojun Grace and Shams BANIHANI 2016. "Scaling-Up South-South Cooperation for Sustainable Development," UNDP Working Paper.
- WEINSTEIN Barbara, 1990. "The Industrialists, the State, and the Issues of Worker Training and Social Services in Brazil, 1930-1950," *Hispanic American Historical Review*, 70 (3): 379-404.
- , 1996. *For Social Peace in Brazil: Industrialists and the Remaking of the Working Class in São Paulo* (Chapel Hill, UNC Press).
- , 1997. "Unskilled Workers, Skilled Housewife: Constructing the Working-Class Woman in São Paulo, Brazil," in John FRENCH and Daniel JAMES, eds, *The Gendered Worlds of Latin American Workers: From Household and Factory to Union Hall and the Ballot Box* (Durham, Duke University Press: 72-98).
- WESTNEY Eleanor, 1982. *Imitation and Innovation: The Transfer of Western Organizational Patterns to Meiji Japan* (Cambridge, Harvard University Press).
- WHALLEY John and Adrian ZIDERMAN, 1990. "Financing Training in Developing Countries: The Role of Payroll Taxes," *Economics of Education Review*, 9 (4): 377-387.
- WILSON David, 1993. "Reforming Technical and Technological Education," *The Vocational Aspect of Education*, 45 (3): 265-284.
- WOLFE Joel, 2010. *Autos and Progress: The Brazilian Search for Modernity* (Oxford, Oxford University Press).
- WORLD BANK, 1991. *Vocational and Technical Education and Training* (Washington World Bank).
- WORLD BANK, 2020. *World Development Indicators* (Washington, World Bank).
- WHO (WORLD HEALTH ORGANIZATION), 2014. *South-South and Triangular Cooperation in Health. Current status and trends* (Geneva, World Health Organization).
- ZHOU Yiping, 2010. "The Future of South-South Development Assistance and the Role of the UN," *Remarks by Mr. Yiping Zhou, Director of the Special Unit for South-South Cooperation in UNDP to the OECD meeting of National Focal Points for Policy Coherence for Development* (Paris, OECD).

Résumé

Le modèle latino-américain d'enseignement professionnelle a été largement décrit comme une « success story » née sur place, en particulier par les universitaires et ses acteurs qui sont conscients des déficits de compétences de la région, se méfient des solutions venues de l'étranger et sont plus généralement de tout type de transferts institutionnels. Ce modèle latino-américain est-il vraiment local ? Dans cet article, je combine des données qualitatives et quantitatives pour retrouver l'origine des mœurs et des méthodes du modèle non pas dans le Nouveau Monde, mais en Europe centrale, puis j'identifie trois voies de transmission différentes au xx^e siècle : l'*imitation* par des Latino-Américains d'origine, d'ascendance et/ou de formation allemands pendant la période précédant la Seconde Guerre mondiale ; la *propagation* par des attachés et conseillers de l'Allemagne de l'Ouest dans un effort pour rétablir l'image du pays au lendemain de la guerre ; et l'*adaptation* par des employeurs et décideurs locaux – qui avaient reçu un appui supplémentaire de l'Allemagne – à la fin du siècle passé. Les résultats suggèrent que l'importation institutionnelle est moins un *événement* discret ou un *résultat* à éviter qu'un *processus* continu qui, premièrement, implique la traduction, l'adaptation et, parfois, la dissimulation par les importateurs et les exportateurs et, deuxièmement, est facilitée par les immigrants, leurs descendants et les diplomates dans les zones de contact transnational.

Mots-clés : Migration; Allemands; Enseignement professionnelle; Amérique latine; Profession.

Zusammenfassung

Das lateinamerikanische Berufsbildungsmodell wird weithin als eine einheimische Erfolgsgeschichte dargestellt, insbesondere von Wissenschaftlern und Beteiligten, die sich der Qualifikationsdefizite der Region bewusst sind, zugleich fremde Lösungen fürchten und institutionellen Transfers meist misstrauisch gegenüberstehen. Ist das lateinamerikanische Modell wirklich „hausgemacht“? Mit einer Kombination aus qualitativen und quantitativen Daten suche ich die Sitten und Methoden des Modells nicht nur in der Neuen Welt zu orten, sondern verfolge sie bis nach Mitteleuropa und kann derart drei unterschiedliche Übertragungswege im 20. Jahrhundert ermitteln: die *Nachahmung* durch Lateinamerikaner deutscher Herkunft, Abstammung und/oder Ausbildung im Vorfeld des Zweiten Weltkriegs; die *Verbreitung* durch westdeutsche Attachés und Berater, um das Image ihres Landes nach dem Krieg zu rehabilitieren; und die *Anpassung* durch lokale Arbeitgeber und Entscheidungsträger am Ende des letzten Jahrhunderts – die zusätzlich von Deutschland unterstützt worden waren. Die Ergebnisse deuten darauf hin, dass die offizielle Einführung weniger ein diskretes *Ereignis* oder ein zu vermeidendes *Resultat* ist, als vielmehr ein fortlaufender *Prozess*, dem erstens Übersetzung, Anpassung und manchmal Verschleierung von Seiten der Importeure und Exporteure zugrunde liegt und der zweitens durch Einwanderer, deren Nachkommen und Diplomaten in überstaatlichen Berührungszonen erleichtert wird.

Schlüsselwörter: Auswanderung; Deutsche; Berufsbildung; Lateinamerika; Beruf.