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1 Introduction

Societies shape their labor markets in multiple ways, most directly through their labor market institutions. But it is equally true that the conditions on the labor market can have a profound impact on the course of societies. An example of the latter is the availability of cheap labor released from British agriculture before 1750, which enabled the Industrial Revolution and started a period of rapid technological progress that is still ongoing (Allen, 1999). A second example is the labor movement's success in pushing for more inclusive political institutions, which lies at the origin of most societies that enjoy widely shared prosperity today. And most recently, the discontent with the bleak labor market outcomes of many low and middle income earners over the last decades has fuelled an authoritarian turn in the politics of many liberal democracies. From this perspective, a clear understanding of the macro-trends affecting our labor markets is a precondition for an informed discussion about what our societies will look like in the future, what we want them to look like, and what can be done to align the two.

In that spirit, the first three substantive chapters of this thesis are devoted to describing and analyzing macro-trends of the recent decades on labor markets around the world. If the country level is an unusual level of analysis for an empirical PhD thesis in economics today, it is not for a lack of relevance: most important political decisions and societal discussions still play out at the national level (Rodrik, 2013c), and the share of global income differences that is accounted for by the country of residence is at a historical high of more than eighty percent (Milanovic, 2012). Rather, the scarcity of such studies arises because cross-country analyses are notoriously challenging due to the large number of potentially relevant variables, combined with a lack of internationally comparable data for a sufficient number of countries and years.

The “stars” of this thesis are hence the new and uniquely rich databases it is able to draw on, which relax these restrictions at least somewhat: the extended “Occupational Wages around the World” database by Freeman and Oostendorp (2020), and harmonized survey data from the “Integrated Public Use Microdata Series” (Minnesota Population Center, 2018) and the “International Income Distribution Dataset” (Montenegro and Hirn, 2009), allow me to analyze occupational wage and employment trends since the 1950s in more than 150 countries, going significantly beyond the existing literature in terms of the countries and time period covered.

Another feature of these data is that they allow analyses at the level of detailed *occupations*: while occupations had fallen somewhat out of fashion in the modern economics

literature (ceding ground to *education* as the preferred category of analysis), they have made a comeback in a recent literature initiated by Autor et al. (2003). This is because they are proving to be particularly useful for understanding how technological change affects the demand for specific *tasks* in the labor market. Moreover, they allow for a comprehensive analysis of changes in the returns to skill also in developing countries, where formal educational attainments have often been low and where it is particularly important to take account of informal apprenticeships and learning on the job.

The remainder of this thesis is organized as follows: in chapter 2, which is joint work with Richard B. Freeman and Remco Oostendorp, we find that wage differentials between skilled and unskilled occupations around the world have followed a U-shaped pattern: they narrowed substantially between the 1950s and 1980s, and then widened from the 1980s through 2000s in most countries despite country differences in levels of income, growth rates, and labor market institutions. The chapter shows that the narrowing was due in part to the huge post-World War II increase in the proportion of educated workers in all countries, while the subsequent widening was due in part to the weakening of trade unions and a shift in demand to more skilled workers associated with rising trade. Thus, supply, demand, and institutional forces have all been drivers of occupational skill differentials, ruling out simple single-factor explanations of change. The chapter concludes with a call for improving the collection of occupational wage data to understand future changes in the world of work.

Chapter 3 zooms in on a particular group of workers, production workers in manufacturing: I show that in the 1950s, the most skilled production workers tended to work in craftsman occupations, some of which commanded wages even rivaling those of their colleagues in white collar occupations. However, the demand for manufacturing craftsmen has since decreased in countries of all income groups and regions, following the adoption of more capital intensive production methods. The “skill-biased technological change”-narrative hence does not reflect the experience of many production workers: the market value of *their* skills, often acquired during apprenticeships of several years, tended to decline rather than increase as the division of labor increased and monotonous workplaces similar to the one of Charlie Chaplin’s Tramp in the 1936 movie “Modern Times“ proliferated.

The findings of this chapter highlight that in a technologically dynamic environment, investments into specific human capital are inherently risky from the point of view of individual workers—an insight that may have increasing relevance also beyond manufacturing for today’s labor markets, as industrial robots and artificial intelligence become more powerful and are expected to render the skills of many workers obsolete. From this perspective, social safety nets and subsidized (re-)training programs have important insurance features, and may be needed to incentivize workers to undertake sufficient human capital investments.

Chapter 4 provides new evidence on “premature deindustrialization”, the tendency of today’s developing countries to run out of industrialization opportunities at much lower levels of income and manufacturing employment than the countries which industrialized earlier. Although Rodrik (2017) considers the phenomenon to be “*one of the most important eco-*

nomie phenomena of our time“, there is some debate on whether it is structural or transitory, and little evidence on the broader labor market consequences.

An analysis of disaggregated occupational employment data reveals that the manufacturing job losses have been concentrated in occupations where employment tends to be unskilled yet formal, and which are considered to be vulnerable to automation by ICT. Hence, my findings hint at substantial technology transfers to the manufacturing sectors of developing countries in recent decades, resulting in a structural reduction in their ability to employ unskilled labor more productively than other industries. While globalization has likely been instrumental in this technology transfer, this casts doubt on the hope expressed by Haraguchi et al. (2017) that unskilled manufacturing jobs will return to developing countries in large numbers once China has completed its upward movement in manufacturing value chains.

In summary, my findings on global manufacturing in chapters 3 and 4 suggest that while the displacement of skilled craftsmen among manufacturing production workers has been a long-run trend, a more recent feature of manufacturing automation is that it creates fewer “compensating” jobs for unskilled machine operators and laborers, as well as middle-skilled clerks. Hence, future growth in developing countries may have to rely more on improvements in “fundamentals” such as education and governance, and policy makers need to focus on a broader range of sectoral policies than in the past (including agriculture, natural resources, and services, cf. Stiglitz (2018)). Moreover, organized labor will have to improve its representation beyond manufacturing if it wants to continue to play its historical role of pushing for shared prosperity and more inclusive political processes.

Chapter 5 deviates from the aggregate and “bird’s-eye” perspective of the preceding three chapters: it zooms in on the lives of the smallholder dairy farmers of a cooperative in the highlands near Eldoret in Kenya, and analyzes the role that the monthly milk payments from the cooperative play in their household finances. In a field experiment that I conducted together with Berber Kramer from the International Food Policy Research Institute, we asked them to allocate both their milk income and a one-time gift between an early and a deferred payment date. Puzzling at first sight, we find that a large majority deferred their milk payments while rarely choosing to also defer the gift. Participants’ survey responses suggest that we observe this difference because of mental accounting: participants earmarked their regular milk payments, but not the gift, to save for bulky expenditures. Hence, deferred payments can provide value to smallholder farmers by functioning as a savings device, even when decisions over windfall income would suggest a preference for early payments.

This thesis hence spans across topics ranging from labor-, development- and macro- to behavioral economics. I am grateful to modern thesis rules in economics (and to my supervisors) for making this possible: it has been stimulating to familiarize myself with the different literatures, and I believe that the process has made me a more well-rounded researcher. It has also fostered my thinking about the boundaries between the subfields within economics, the other social sciences, and methodological conventions. In the concluding afterword, I offer some reflections on this topic. In particular, I argue that our discipline

could be even more useful at informing policymakers if it put more emphasis on the societal importance of research topics as opposed to the “hardness” of the theory or research design.