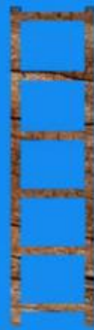
lsesu economics society - issue 1 15-16

# RATIONALE

in a world without reason, turn to economics



## Going up?

*Reassessing Social Mobility*

In this issue:

Technology and Mobility

The Hukou system in China

An Interview with Sociologist Mike Savage

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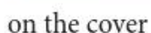


on the cover
*design by* **JACOB HODGSON STOKES**

# Editorial

## Changing the Conversation

There has been a recent interest amongst economics students at the LSE to explore areas that the field has traditionally left untouched, or to look at certain areas with a new lens, which follows the general trend in the field of economics. The LSESU Economics Society's theme for the year has been "Changing the Conversation", which reflects that sentiment quite well. *Rationale* has followed suit.

Our team decided to focus on the topic of social mobility at the first meeting of *Rationale* early in the Michaelmas Term. The topic is seldom spoken of by economists, especially those in academia. Within the topic, we decided to look at two special aspects of mobility, namely social class and technology. You will soon discover that the breadth of issues regarding social mobility that we are able to cover in this issue is quite staggering.

In the first section covering the topics of social class and inequality, we start with Martin Kabrt's analysis of how matching theory can help us understand modern trends in marriage and its relation to mobility. Then, I present my opinion on how economics should look at the concept of class. If you haven't heard about 'yuccies', reading Robin Park's article regarding their effects on gentrification will surely pique your interest. Next, Kavya Saxena discusses the implications of redistribution on social mobility. Our interview for this issue features the eminent sociologist Professor Mike Savage, Head of the Department of Sociology at the LSE, on his recent work on social class. Lastly in the section, we have Mads Mørk's musings on the possibility of a new direction in capitalism.

In the recent decades, technology has drastically changed everything. This should be reflected in the way we analyse the profound effect it has had on social mobility, and Travis James', Jaume Vives', and Lukas Raynaud's pieces look at various different economic aspects of this change. Vaishali Mullapudi's article focuses on the case of M-Pesa's effects in Kenya to assess the effect of a specific technology on social mobility.

Finally, we look at multiple interesting topical issues. Advait Rao Palepu's article looks at how the sorry state of student debt in America stunts social mobility. Alberto Martelli's considers mobility amongst refugees in Italy, whereas Neha Basu's piece analyses the old practice of the hukou in China and how it has evolved. Then, read about Stephen Chandler's discomfort with the recent Tory plan cut the tax credits in Britain. Luca Dann's article looks at how agriculture affects structural transformation in developing countries. Lastly, we have Henry Mitchell's analysis of Thomas Piketty's bestseller *Capital*, focusing on the '$r>g$' hypothesis.

I would like to thank Fiona Tan (former designer for *Rationale*), Honglin Jiang (former Editor-in-Chief of *Rationale*), Divya K Bhavani, and Dr. Judith Shapiro for their invaluable input whenever needed. The LSESU Economics Society Executive has also been instrumental in the creation of this issue. Finally, I would like to thank the amazing team of editors, writers, and designers, who are credited at the end of the issue, for their great work. We are proud to present to you Issue 1, 2015-2016 of *Rationale*.

**PUJAN MODI**

# The Death of Inter-class Romance

*While promoting gender equality, contemporary trends in marital sorting have also helped to undermine social mobility*

*by* **MARTIN KABRT**

"When this ship docks, I'm getting off with you, Jack!"

"This is crazy, Rose!"

"I know. It doesn't make any sense. That's why I trust it."

It is one of the oldest literary archetypes. He is a prince, she is a poor, but good-hearted girl (probably mistreated by her step-mother). She is the daughter of the richest man in town, he is an orphaned street artist. They come from different worlds, they fall in love, and neither cares about the differences in wealth and status.

While still revered in fiction, love above or below one's station is increasingly rare in real life. Last year, a study led by University of Pennsylvania economist Jeremy Greenwood found that over the past half-century, there has been a remarkable increase in the US in positive assortative mating – the tendency of similar people to marry each other. Educational attainment is usually used as a proxy for socio-economic class in such studies. Controlling for increases in education levels between 1960 and 2005, the study finds that the odds that a man or woman marries a person with the same educational attainment rose by 18%. University-educated men and women, in particular, are now 23% more likely to marry each other than in 1960. "Men used to marry their secretaries," Brookings Institution's Isabel Sawhill explains. "Now they marry the woman they met in med school."

What has happened? A convenient place to start our investigation is to look into economic theory.

The first and arguably still the best contribution to the marriage market literature is that of recently deceased economist Gary Becker (1930-2014), whose work in broadening the horizons of economics beyond money markets earned him a Nobel in 1992. In his paper on marital sorting, he starts from the ►

simple assumption that because the decision to marry is typically voluntary, the theory of preferences can be applied. So people simply choose to marry when they expect their utility level to increase above what it would be were they to remain single. Men and women with different qualities compete as they seek mates, and so a market in marriage exists. Adding the usual behavioural assumptions of neo-classical economics, Becker builds a model which yields startling results.

Firstly, the marriage market appears to be astonishingly efficient, coming very close to what Becker calls "optimal sorting". Whilst all actors are only concerned about their own welfare, the market acts as if it maximizes not the gain from marriage compared to remaining single for any particular marriage, but the total (or, equivalently, the average) gain across *all* marriages. The characteristics of this optimal sorting are no less interesting. Pairing of 'likes' is desirable when the qualities of the spouses act as complements, while association of 'unlikes' is optimal when traits are easily substitutable.

Negative assortative mating – opposites attract – is optimal when the gains from marriage are due to specialisation and exchange. Dominant and submissive persons tend to marry each other, Becker suggests, because the dominant person's time can be used in situations calling for dominance and the deferential person's time in those calling for deference. Labour income is another example. Wages earned by spouses are perfectly substitutable. Perfect negative assortative mating is therefore optimal, because it maximises the gain from division of labour. The low-wage partner spends more time performing household duties because the foregone market value of their time is lower. By pairing a high-wage individual with a low-wage individual, the lower-valued time is used more extensively in household production and the expensive time in market production.

Positive assortative mating, on the other hand, is optimal when the qualities of spouses are complements rather than substitutes. Education is an obvious example of such a mutually reinforcing trait, but Becker includes also age, religion, ethnicity – any trait where similarity rather than difference increases the average gain from marriage. Other theorists have later added further benefits of having similar preferences, including greater positive effects of joint consumption economies and household public goods. Greater similarity also decreases uncertainty about the "quality" of children.

**"people now marry over similarities rather than differences"**

Positive assortative mating is on the rise because the gains from shared qualities increasingly dominate – people now marry over similarities rather than differences. Economic and social progress over the past several decades diminished the gains from marriage that arise from specialisation in gender roles. Men are no longer just seeking a homemaker, and women a provider. Both are now looking for a *partner*, a life companion. With the advances in female labour force participation and the triumph of the feminist cause in marshalling gender equality, the traditional arrangement where responsibilities in the household are clearly delineated is disappearing. The benefits arising from mutual reinforcement of the spouses' qualities are gaining on importance. Both men and women seek a person that can help with the mortgage, housework and child upbringing; someone they can eat pizza, go to the gym or discuss Inception with. Someone…. like themselves.

This, for sure, is a good thing. The portrait of the trends in marital sorting, however, is not complete yet. There are at least two problems with assortative mating. First, it increases income inequality. The study of Greenwood et al. considers several counterfactual scenarios in which the matching pattern is random rather than assortative. Intuitively, since income is usually measured by household rather than by worker, random sorting works to equalise income across households (If spouses chose each other at random, many high-income women would marry low-income men, and vice versa). The researchers find that in 1960, the Gini coefficient – a standard measure of inequality on a scale from 0 (perfect equality) to 1 (one individual has all income) – would have been largely unaffected had marital sorting been random. In 2005, by contrast, the coefficient would drop from 0.43 to 0.34– back to 1960s US inequality levels!

The explanation of this difference is simple. The participation of married women in the labour force increased considerably since 1960 across all income percentiles, most markedly in the top quintile. While marital sorting was assortative in education even in 1960, it did not matter as much because the wife's share of household labour income was much smaller. Women, and educated women in particular, now earn a lot more than they did in 1960. Educational assortative mating therefore not only increased substantially since 1960s, it now also matters much more for income distribution across households.

The second problem is closely related to the first one. While the educated rich pool two high incomes in relatively stable and lasting marriages, the low-skill, uneducated poor cohabitate in fragile relationships. Marriage itself is becoming the preserve of the rich and a *marriage gap* opens up to further ►

exacerbate the gulf between the poor and the rich.

While a range of accounts have been put forward to elucidate why marriage is going out of fashion, most fail to explain why the effect varies across income percentiles. The weakening of social norms against divorce, cohabitation and non-marital childbearing, for example, can give some insight into why almost half of British babies are now born to unmarried mothers (up from 11% in 1979 and 6% in 1946), but not why this share is less than 25% when the parents are in "higher managerial and professional occupations", but 65% if parents are in "routine and semi-routine occupations"(these terms are used by the Office for National Statistics to describe socio-economic classifications). People belonging to the former category are now 48% more likely to marry than those in the latter (up from 24% in 2001).

Some blame inter-class value differences, but the actual reason is predominantly economic. With rapid technological progress placing increasing demands on skill and education in the labour market, two high-income university graduates can provide a robust financial foundation for marriage, while uneducated workers struggle to find steady, decently paid jobs that could support their marriages. Economists Goldin, Katz and Margo show that class differences in marriage rates have, in fact, been correlated with economic inequality in America for at least 130 years. They find striking similarities between the current marriage gap with that of the late 19th century 'Gilded Age' America, when the industrial transformation of the economy led to fast rising economic inequality. The two phenomena have moved in parallel since. This is not to say that the link from economic to marriage inequality is perfectly causal, but rather that there is a historical pattern that cannot be explained by value differences. In fact, the causal link may well run in both ways, making the effect self-reinforcing. Statistics show that cohabitation is far less stable than marriage, with unmarried parents more than twice as likely to split within the 7 years after the child's birth. Children growing up with married parents tend to have better life chances and are themselves more likely to form stable relationships. The marriage gap, therefore, to a certain extent caused by economic inequality, contributes to even more of it.

**"Unfortunately, the effects of assortative mating are very asymmetric across income percentiles"**

The gradual disappearance of the strict division of household labour and the increasing tendency of couples to marry over similarities rather than differences is rightly perceived as a social achievement. Not only is it an accomplishment for gender equality, but – as Becker's theoretical work also shows – mutual reinforcement of qualities also leads to greater average "gains from marriage" than those achieved by specialisation. Unfortunately, the effects of assortative mating are very asymmetric across income percentiles, creating a class of "super-families" at the top and a class of impoverished single parents at the bottom.

If the marriage market sorts by educational attainment, governments need to work towards providing more schooling for everyone. If we can't convince Roses to marry Jacks, we must do our best to make sure everyone sails in the first class. ▪

# Social Class and Economics

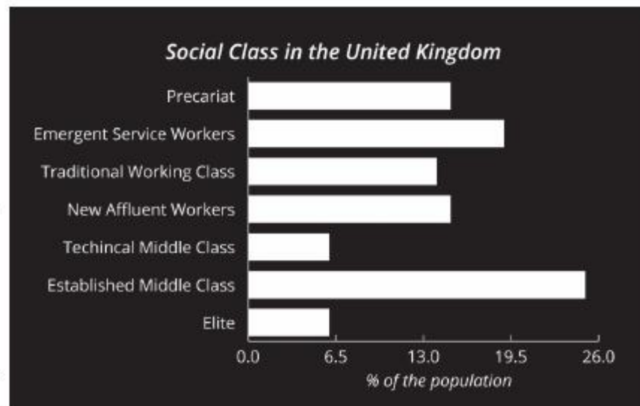
## *Learning from class structure in the United Kingdom*

*by* **PUJAN MODI**

Since the Great Recession, there has been a tendency for economic analysis to focus on more progressive topics, especially ones that tend to be introspective about economics and our society. One very important discussion that has come up has been one regarding inequality, and with it, class. Thomas Piketty's book, *Capital in the Twenty-First Century* has been extremely influential even beyond the traditional economic community. The book, however, looks only at one aspect of class which is tied strongly to income and other financial measures. However, this notion of class is very limited and it may be worth fixing.

Class has always been a very prominent aspect of society in the United Kingdom, especially in England. Traditionally, there were three established classes, the working class, the middle class, and the elite. The working class were generally associated with low-skilled jobs. The middle class tended to be professionals, including doctors, lawyers, and merchants. The elite were predominantly aristocratic. However, the paradigms of class in this country may have changed, especially with economic growth and the fall in inequality in the post-World War II era. The Great British Class Survey was conducted in 2013 to investigate precisely this. The Survey was designed by prominent British sociologists including Professor Mike Savage of the LSE, and Professor Fiona Devine of the University of Manchester. The survey uses French scholar Pierre Bordieu's three-dimensional conception of class: one that includes cultural, social, and economic capital.

Following the Survey, the team of sociologists published their results and analysis in the journal *Sociology*. The underlying classes were extracted using latent class analysis, a statistical technique that allows for the identification of unmeasured class membership in the sample, including for categorical variables such as social class. Using this method, the researchers found seven different classes exist in modern Britain: elite, established middle class, technical middle class, new affluent workers, emergent service workers, traditional working class and precariat. Vast differences were found between the elite and precariat, especially because so much political and academic discourse and policy usually targets the middle classes. The wealth of data generated by the survey led to the recent publication of the book *Social Class in the 21st Century* by many of the researchers involved with the survey and other sociologists.




Although the United Kingdom is one of the best known examples of a society where class is prominent, there are other salient examples. Researchers at Australian National University replicated the methods used in the Great British Class Survey to conduct a similar survey down under to find 5 classes and a less stratified society than that in Britain. In India 'class' has different dimensions, often involving religious associations. A reservation system exists such that people from "other backward classes" are legally entitled to 27% of the civil service positions, although the actual number of people employed in this manner tends to be much lower.

So why is all of this important? It may be argued that we shouldn't care about inequality as long as we create a society with neutral institutions and equality of opportunity. This is all well and good, except neutrality in the face of such strong divides can lead the problem to be pervasive. If we want the economy to provide the correct incentives to each individual, we may be failing. Sociologists from the LSE, who also worked on *Social Class in the 21st Century* have found that there exists a "class-ceiling", much like the infamous gendered "glass-ceiling", which means that your class background matters significantly for income-related outcomes. This points to the fact that ►

**"your class background matters significantly for income-related outcomes"**

we may be living in a society that is not meritocratic enough after all, especially with regards to social mobility. Further, authors of the book find that although in general, post-secondary education promotes social mobility, going to an elite university such as Oxford, Cambridge or LSE has a large upward effect on income which creates divides.

There may be new ways to explore inequality, mobility, and class, even from a purely economic standpoint. Professor Phillipe Aghion's work on the Schumpeterian model with other researchers has yielded interesting effects of innovation inequality and social mobility. They find that while innovation increases the income share of the top 1%, it has a positive effect on social mobility. Ideally, however, we can also incorporate categorical variables (or introduce scales for qualitative variables) such as social and cultural capital into our economic analyses. General economics rhetoric of 'top decile' or 'bottom quintile' can be enriched with further meaning by adding social and cultural dimensions.

There is hope of more interdisciplinary research coming out of the LSE, with the recent launch of the International Inequalities Institute. Economics has always found inspiration from different fields when its own methods have been lacking, and when it has needed to expand its horizons. It started off as a philosophical pursuit, benefited from looking into history and in the last century has borrowed heavily from mathematical theory and statistics. I am confident that looking to our sister social sciences, while maintaining econometric rigour, will only improve the field further. ▪

# The Rise of Yuccies

## *The problem of urban gentrification*

*by* **ROBIN PARK**

Brooklyn, NY has changed drastically over the past decade. Rundown buildings have been converted to trendy watering holes and artisanal donut shops. Well-painted fences have replaced tangles of barbed wires. Fairy lights hang from once-obsolete storefronts. Graffiti, haphazardly scrawled with spray paint, have been covered up by paint and varnish. Moustachioed millennials on fixed-geared bikes fill the streets. Rents have skyrocketed.

This phenomenon is not specific to New York City. Rather, it is happening in big cities all over the world. It is gentrification, but of a particular type. At its early stages, the Internet dubbed it *hipster gentrification*. But as "hipsterism" became commercialised and popular—and thus leading, ironically, to its own destruction—a new label was created to describe these gentrifiers: *yuccies*.

A cheeky mononym for "Young Urban Creatives", yuccies are the progeny of yuppies and hipsters. Raised in suburban comfort and typically well educated, yuccies are characterized by the belief that they should be paid for doing what they love. Wealth, or the lack thereof, is often secondary to personal validation. They are also defined by their consumption habits. Like yuppies, they are in pursuit of the new money lifestyle. Like hipsters, they seek objects of quality and "good taste", a subjective valuation, based on marketing and mainstream consensus.

**"yuccies are characterized by the belief that they should be paid for doing what they love"**

The rise of the yuccie may be attributed to several different factors. The recent financial crisis proved that the traditional nine-to-five job does not necessarily guarantee stability. Thus, a millennial's labour decision may weight other factors such as personal preferences and satisfaction derived from the job more heavily than the level of income it provides. Another possible factor is the mere privilege of being able to choose a job rather than being forced into one. Yuccies often come from stable white homes, so they are able to pursue what they favour rather than what they must. This inculcates a desire for transcendence. Because yuccies are educated and often more idealistic in their goals, they would rather pursue what they find to be meaningful rather than that which might increase their wealth. Additionally, technology and social media have played no small role in the creation of yuccies. Sharing ideas at a touch of a button has made creativity more profitable than ever before.

In relation to yuppies, yuccies earn less on average due to the volatility of income in the jobs they work. As a result, they seek cheaper rents—which is why they have started inhabiting historically low-income, black neighbourhoods, previously untouched by members of white suburbia. ►

Some view this "gentrification-by-yuccie" in a positive light. The trash is being picked up more regularly. Public schools are getting better. There is more police protection. The infrastructure is being repaired. It is important, however, to consider whom this is benefitting: not the original inhabitants. Because of the new improvements, rent and prices are climbing, and people are moving away. In a heated diatribe against gentrification in New York City, Brooklyn-raised director Spike Lee describes the situation as "reverse migration." People of colour, who typically earn lower incomes, are moving away from the city to places like Atlanta and North Carolina where housing is relatively more affordable. Moreover, there is also a loss of culture, which Lee attributes to what he calls the "Christopher Columbus Syndrome." The new inhabitants are renaming areas of the city; Bushwick is now called *East Williamsburg*, and *SpaHa* has become a new word for Harlem. Citing specific examples from his childhood, he states:

> *There were brothers playing [expletive] African drums in Mount Morris Park for 40 years and now they can't do it anymore because the new inhabitants said the drums are loud. My father's a great jazz musician. He bought a house in nineteen-[expletive]-sixty-eight, and the [expletive] people moved in last year and called the cops on my father.*

**"In Shoreditch, London, property developers who want to accommodate the influx of higher-paying yuccies have evicted many working class families living below the poverty line"**

The effect reaches far beyond money. Entire communities are being driven out of the city—specifically, African-Americans and other minorities. By invading a space previously belonging to a completely different subset of the population and moulding it to their own liking, yuccies are effacing the trace of another culture that came before them. Hence, yuccies are merely transporting their comfortable cycle of life and replanting it in another space, uprooting its previous inhabitants rather than truly rehabilitating the local economy. Quality of life, for these original inhabitants, is not improving. The need to relocate creates unnecessary hardships. In Shoreditch, London, property developers who want to accommodate the influx of higher-paying yuccies have evicted many working class families living below the poverty line. This past September, hundreds gathered for a protest called 'F*** Parade' which caused damage to businesses near Brick Lane, E2. On the Facebook event for the protest, an organiser wrote, "We will protest this economic warfare with a street party."

Middle-class anti-gentrifiers, though they themselves not directly affected, have taken to publishing lengthy "think-pieces" criticising yuccies. Despite the issues being highlighted and questions being raised, no suitable solution has been posed. Policies that target poverty alleviation and mitigate friction between social classes are often marketed as part of a hazy cloud dubbed the "progressive" cause. But, Ilan Greenberg captures the discrepancy between the agenda and action when he writes in the *New Republic*: "Opposed to newcomers? Wary of people whose values you don't understand? Critical of young people for not living up to an older generation's ideals? It all sounds very reactionary and close-minded."

Still others will argue that gentrification is merely an ►

inevitable cycle of change, and the rise of the yuccies is merely a passing stage in a larger progression. If demand for housing increases, competition will raise prices. Yesterday's yuppies grew into today's yuccies, and tomorrow there will be some new crowd in town. Growing pains may be unavoidable. But perhaps we are pointing the finger in the wrong place. After all, yuccies are moving to these neighbourhoods because they are being outbid or blocked out from the neighbourhoods they originally desired; they may merely be the symptoms of the larger illness of social stratification. Shattering windows of yuccie businesses, then, is like making a mere dent in the much more durable problem of class ceilings. ▪

# Redistribution or Growth

## *The trade-offs for mobility in developing countries*

*by* **KAVYA SAXENA**

Regarding the complementarity between growth and redistribution, it is argued that there is an optimal amount of inequality that is "healthy" for the general economy. Why would the rabbits wish to work if it were not for the carrot dressed up as a financial reward for a risk well taken? Many have questioned this incentive-based approach to one's willingness to step into the job market. What about the macroeconomic variables which allow or deter one from the opportunity of providing labour in the first place? The crux of the belief that boosting equality requires sacrificing efficiency is nothing more than the cherished idea in economics of providing the right incentives. Redistribution appears generally benign in terms of its impact on growth; only

**"there is little evidence that increasing marginal income tax rates reduces work effort"**

in extreme cases is there some evidence that it may have direct negative effects on growth. The relationship between industrialization and inequality is one that presents an interesting understanding of the need for redistribution along the devel-

opment path of a country, as well as the appropriate responses to it. Does nationalizing and keeping state-run banks going at a huge cost to the fiscal system have the same inequality reducing, growth boosting effect as taxes to improve education?

Redistribution offsets unsustainable private debt, a requisite when the market outcomes of an unequal economy could hamper the productivity of labour by impeding access to good healthcare or education. Measures that strive to raise the median household income could allow an economy to steer away from inefficient policies yet economic theory tells us that redistribution will diminish the work ethic of both the rich and the poor by allowing an income increase for the poor. In microeconomic terms, those at the top and those at the bottom of the income ladder are inclined to substitute leisure for work when monetary incentives are involved.

It is not surprising that there is little evidence that increasing marginal income tax rates reduces work effort. Given that there is little to no job-security within the labour market, even for high-income individuals, those who work hard tend to remain diligent due to the prospects of a fall in their income. However, while an increase in taxation may not really diminish the incentive to work, textbook microeconomic models don't account for the use of loopholes. More importantly, investments and activities shift to vehicles eligible for tax breaks, such as foreign investment.

At the bottom of the income distribution, some form of social security allows those at the lower ends of the distribution to take risks, and invest in 'projects' they wouldn't consider otherwise, giving a boost to the economy. Yet, there is a real reason for concern about the effects of redistribution on incentives to work or grow. Given a policy where benefits are targeted at households below a certain income level, an increase in income could carry the recipient over the benefits threshold. For many, the value of benefits lost may be more than the increment in income, which is why many small businesses do lose the incentive to grow if they see themselves losing out on the factor subsidies.

Thus, the relationship between industrialization and inequality is one that presents an interesting understanding of the need for redistribution along the development path of a country, as well as the ►

appropriate responses to it. In a poor country where the bulk of the workforce is employed in traditional agriculture, a rise in urban industrial opportunities is likely to produce inequality, at least during the early stages of industrialization. The urban migration of farmers as they look for work in the industrial sector in order to earn the illusory higher pay causes income gaps with an increase in the supply of labour force for the industrial sector, and a simultaneous fall in the excess labour supply in the agricultural sector. Yet, if one were to try to curb the rise in inequality by providing protection in the form of subsidies to smaller firms, or by ensuring unemployment insurance, it can thwart the competitive process that produces efficient industries and workers. One has to question whether access to the opportunities created by the development of market forces is even possible without redistribution for most workers. In developing economies, democracy creates demands for redistribution, which can easily prove inefficient. Without strong state credibility and institutions, as is seen in countries with low levels of development, administrative capacity and census data is exceptionally low.

This begs the question, is redistribution without strong institutions even beneficial, or merely a fiscal burden that does not achieve the political demands it set out to meet? Most developing countries, with their dependence on capital markets, cannot afford to undermine fiscal restraint as an important priority. A growing economy can allow far more resources for redistribution. The share of social spending – health, education, social security, may be less in low-income countries in the Asia and Pacific region and in sub-Saharan Africa to begin with. The redistributive impact of these social transfers is further diminished by lack of coverage for low-income groups. Scarce government resources mean that universal coverage is unrealistic, yet low administrative capacity means targeting leads to leakages. Income is difficult to assess and track in countries that do not have well-developed tax registries or those that have large informal labour markets.

**“Social protection could become an engine for growth if it is complemented by productive investment”**

What sort of redistribution is efficient then for poor countries? Since the spending of most social transfers increases consumption demand for all sorts of goods and services, it will have varying economic impacts on the livelihoods of the most vulnerable of the population. Depending on whether it reaches markets that have the elasticity required to respond efficiently and rapidly enough to prevent prices from increasing, transfers have the paradoxical potential to diminish the real income of the poorest. For social transfers to be non-detrimental, the government has to simultaneously spend on infrastructure to ensure supply elasticity.

A similar synergy between the supply and demand sides is required for ensuring mobility through spending on education – one of the most potent ways to influence inter-generational mobility. Expanding access for disadvantaged groups to education and healthcare, enhances the progressivity of public spending as well as lowering future income inequality. In Brazil, the Bolsa Familia – a cash transfer program conditional on sending children to school and getting them vaccinated, is the most progressive income source. It contributed to a reduction of the poverty gap of 12% and of inequality measured in terms of the Gini coefficient of 10% between 2001 and 2005 while accounting for 0.35% of GDP. Importantly, the sharpest criticisms of policies that focus on educating children such as Bolsa Familia, is that mere spending on education will not ensure social mobility without spending on infrastructure and sectors that would generate employment. It would do little to address inequality if a welfare scheme merely keeps the poor just above a subsistence level, without the means to move up the social ladder.

The choice between effective policies to impact growth while ensuring mobility presents intricate trade-offs with potential long-run impacts. Social protection could become an engine for growth if it is complemented by productive investment that enhances productivity in economic sectors that are of particular importance to poor people, specifically agriculture. Sensible redistribution is however imperative, and would mean the difference between growth that is clearly unsustainable, and one that is going to last requiring realistic assessments about what social protection can achieve. ▪

# IN CONVERSATION
## with Professor Mike Savage

*by* **PUJAN MODI** *&* **VIRGILIO URBINA-LAZARDI**

Professor Mike Savage is the Head of the Department of Sociology at the LSE, and a co-director of the International Inequalities Institute. He was instrumental to the creation and analysis of the Great British Class Survey and was recently involved with the book *Social Class in the 21st Century*, with many other prominent sociologists. He is eminent in his field for work on social class, inequality, and social mobility, which made him a natural choice for an interview with *Rationale*. We ask him about his work on the Survey, his new book, and what he might have to say to economists.

**➨ Pujan Modi (PM): What prompted the creation of the Great British Class Survey?**

About ten years ago, I became very interested in how social scientists were making use of 'big data', which are new forms of data that are not based on traditional surveys, interviews. I wrote an article in a Sociology journal with my colleague Roger Burrows called "The Coming Crisis of Empirical Sociology." We argued that sociologists have to prepare to get their hands dirty and do stuff which they're not used to doing with data. It had a big impact, and there was mixed reaction.

In 2009 the BBC got in touch with me and said they wanted to do a web survey of social class, and of course based on what I had argued in the article I couldn't really say "no". They also got Fiona Devine from the University of Manchester and we started working on the questions. They hosted it on the BBC website, which is quite high profile and the survey was bound to get a lot of traffic.

**➨ Virgilio Urbina-Lazardi (VUL): You spoke about the issues with the methodology of the survey. Were you worried about the selection bias? What methods did you use to get rid of this?**

It became very apparent that selection was going to be an issue, and there isn't really an easy control for it because, regardless of income levels, whoever would answer the survey would likely be interested in 'BBC' sorts of things. We managed to get an extra survey, which was more nationally representative with same questions. Now there are ways of trying to weight skewed sample survey data but they are really problematic to apply because there may be certain unknown biases. Secondly, and this is what we did with the book, we can't really use the survey to look at patterns on the whole but we can analyse the people who did it in bigger numbers, which were the 'upper class' people. The book is very much about the 'upper class', if you like, which gets rid of the sample selection problem in a way. This wouldn't satisfy a statistician but I think given the type of data, I think it's the best we could do.

**➨ PM: And how did the book, *Social Class in the 21st Century* come about?**

I am no expert on web survey. It immediately became clear that the web survey was skewed towards a certain demographic. We had to make the sample more nationally representative. To be honest the BBC weren't initially excited by the data. They were interested in making a documentary but this was given up on quite quickly. But then we used this technique called "latent class analysis" to try and cluster the data on three dimensions, namely, economic, social and cultural capital, which gave us this set of seven classes. When the BBC saw that, they wanted us to have an academic paper accepted and time the publication with the release of their story. They were very concerned that it should be referenced and they didn't want to cut any corners, which was great. So we produced this initial paper in 2013 in *Sociology*. At that point we had no thoughts about anything bigger. But the paper got so much interest, including a lot of criticism. Shortly after Penguin, which don't normally publish in social science, but have a mass circulation, got in touch and asked if we would be interested in doing something with them. After that we assembled quite a team of writers to ►

help us work on the book.

**➨ VUL: Have you done a lot of work on social stratification and the issue of class having a structural dimension to a market society?**

Yes, I have. I did some historical work on the change of class structure in the 20th century, then I did more interview-based work and got people to talk about class and class identities. I got a book out, called *Culture, Class, Distinction* with a bunch of people in the mid-2000s where we asked those questions The Great British Class Survey was a kind of extension of that.

**➨ PM: You use three dimensions to define class: economic, cultural, and social. Does this differ from your past definitions of class?**

Initially it was Pierre Bordieu who came up with this three-dimensional definition. That's the model we took. In *Culture, Class Distinction*, we mainly focused on cultural capital. People know about economic capital, but are less clear on cultural capital, certainly in the more recent period. Our contribution in the Great British Class Survey is having the three more equally discussed.

Also, shortly after the survey's results were published Piketty's work on inequality was first published. What he's really doing there is putting economic capital back on the agenda. And so we became very interested in publishing a book from a sociological perspective that also emphasized economic capital, rather than solely cultural capital, which is what we've mainly focused on before.

**➨ PM: Do you think these paradigms of class, the way they are defined in the book and the survey are generalizable to other parts of the world, especially outside the west?**

I think not. That's one of the important things about the book. Many measures of class do claim to be generalisable. Occupational class, particularly, stays the same whether it's in Pakistan or London. There are international, standardised definitions of class. Once you start taking this approach, the meaning of cultural capital will vary. In Britain, for example, it is tied to opera and classical music but in China it's clearly different; classical music is strongly associated with the Communist Party. I do think that the British model of class shouldn't be exported somewhere else. But you could look at the approach and see how it would look somewhere else, with different numbers of classes and different meanings of classes.

**➨ PM: In economics, we rarely talk about class independently of income or income inequality. Do you think that economics, and other social sciences can benefit from taking these other approaches or are they just distinct ways of looking at it?**

This is a very interesting issue. At the LSE, there is a chance to engage with economists who are interested in this. I'm now involved in the International Inequalities Institute which does have some economists including people like Frank Cowell and Thomas Piketty. It is a very interesting forum to think about these issues. I would say that this notion of class we are using is more in tune with economists, than most sociologists, because we use the notion of economic and social capital. The economic notion of capital is quite similar to Piketty's, and I don't

> **“education in a way reinforces the good prospects of those with an already good background”**

see why they couldn't talk about cultural capital, if they had the mind to. In a way our research has shifted from something purely sociological to something that has potential for cross-fertilisation.

We had an interview with Piketty recently for our website and he obviously thought it is an important concept. Interestingly, he was also influenced by Pierre Bordieu.

**➨ VUL: Do you think the concept of class has been overshadowed in the last couple of decades?**

Certainly. The argument in the book is that what the concept of class gives you is a way of looking at things together. If you need a measure of inequality, then probably economists can give you a much better way of doing it, say, the Gini coefficient, or income deciles. But where class helps is to make links between different areas. So you know when there is an elite class that they will be particularly wealthy, and they will have access to cultural capital, social networks, and they will be more politically mobilized. So that's taking it beyond a purely economic measure and defining it more broadly.

**➨ PM: Do you have anything to say about social mobility, especially in relation to the survey?**

In the book there's a chapter on social mobility. Two of my colleagues, Sam Friedman and Daniel Laurison who are two of the book's co-authors, have also been on the news recently talking about this subject.

What they did, using similar methodology, was take people in top jobs - senior management, lawyers, doctors, CEOs - and compared their income based on social background. What they found out was that if, say, you were a lawyer, and your parents were from senior ►

management, then you received higher salary than if your parents were, say, working class, even if you both were at the same job. So, your class background affects you even if you've managed to climb the ladder.

**the big question for us today is are we returning to that very divisive society or not**

### ➨ VUL: To what extent can education mitigate the effects of a class background?

Education is important. In the new class system we've identified, the elite is not closed. You can get into it, mainly by investing in education. But, at the same time, what we have found is that education in a way reinforces the good prospects of those with an already good background. What we're particularly interested in doing is looking at the effects of elite universities. So, of our very large sample size, we can look at the effects of going to LSE, rather than Oxford. That shows that going to the half-dozen 'Golden-triangle' universities have significant effects on your income over and above other things that we usually consider, such as whether you went to public school, or studied economics over philosophy. It shows the importance of which university you go to.

### ➨ PM: What about similar effects, but related to technology? For example, you outline the presence of a precariat, does that have anything to do with the destruction of several jobs that used to be relatively well-paying?

I know this is a big debate in economics related to skill and technological transformation and the polarization between people at the top and people at the bottom. And certainly we're interested in technology in a different sort of way. I'm more interested in how using devices of certain kinds gives people a sort of cultural capital, and generates a powerful generational divide. Younger people have, as a result, an easier time gathering cultural and social capital, but they have a hard time translating this into economic capital.

### ➨ PM: Are there any plans to do a more longitudinal survey?

That's an obvious way to go, to look at it longitudinally. The BBC have closed down that part of their operations, The Lab. What you could do is try and get some questions on cultural and social capital on existing surveys. There are some questions in them, but not very many. For example, we are currently in talks with the European Social Survey, which is a cross-sectional survey, to get a few questions on it. Unfortunately, there isn't much time to lobby, but it would be the way to go, to get questions on existing major surveys.

### ➨ VUL: Is there a message you'd like to give to the readers of Rationale, about the importance of this topic and how we should look at it?

I would put it in terms of Piketty's arguments. In the middle decades of the 20th century there was a decline in inequality. But that was an aberration. In the Victorian period, there were wide class differences with an aristocracy that was much better off than any other class; and I think the big question for us today is are we returning to that very divisive society or not. It's mentioned in the book, and we seem to be doing that. We need to think about how we challenge it. Not just by including mobility but also by trying to question the very distribution of assets and capital in the first place; in other words, to question the pre-distributional relations of power in the workplace and of ownership in the economy as a whole.

### ➨ PM: Is neutrality an option here, or do you think there needs to be some kind of active policy?

I would say that capital accumulation year by year will mean that left to itself inequality in capitalist economies will grow. Neutrality has already allowed it to happen. I think Piketty's interesting here. I don't think relying on established views will be the answer either. We can't just say we need to rethink taxes. There's a repertoire of things that needs to be rethought in terms of contemporary capitalism which is a different beast from what it was 50 years ago. Maybe issues about rethinking stakeholders, who can be entitled to more rents and assets, things along those lines including structural changes. And there are many different models to explore. For example, the German model of national bargaining councils is more inclined to recognizing worker's rights. Those could be ways to think about challenging entrenched class structures. ▪

# Social Mobility in the Workplace

## *The business case for a reformed capitalism*

*by* **MADS MØRK**

According to Adam Smith societies prosper by a kind of trickle-down economics. In Smith's understanding, the development of the division of labour is the main driver for an efficient and prosperous industry. Indeed, this division of labour also leads to a higher demand for work-power and a heightened specialisation of employees, wherefore they can demand and receive higher wages for their particular kinds of work. This means that the greater profit earned by a more efficient industry will naturally 'trickle down' to employees, thus creating a natural impediment to increased gaps in earnings between employees and employers. In strictly economic matters, then, each should focus on maximizing his or her own profits. However, a natural benevolence in mankind will, according to Smith, cause those who are in the labour market to care for those outside of it, thus allowing these people to eventually join the labour force. Taken together, this implies that in a well-ordered capitalist society, not only stockholders but everybody progressively improves their standards of living and has the prospect of raising themselves – by the worth of their work – to a higher social status. Indeed, this possibility of continually improving one's material conditions of living along with one's status in the workplace is an important aspect of social mobility.

> **"in a well-ordered capitalist society, not only stockholders but everybody progressively improves their standards of living"**

Perhaps Smith's view on humankind in society and of the functioning of capitalist society in general is more ideal than real, and has indeed been subjected to a great many criticisms. Yet Smith continues to be an inspiration for liberal and neoliberal economists and politicians, which makes him relevant in a discussion of modern issues in social mobility.

Traditionally, Smith's work has been interpreted to imply that focus on environmental sustainability and issues of social mobility for their own sakes are 'unfashionable'. For Milton Friedman, for example, such a focus on social responsibility on the part of businesses reduces the business community to, in his words, "unwitting puppets of the intellectual forces that have been undermining the basis of a free society". Indeed, "there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud". According to Friedman, social mobility is something that is achieved through competition in an open market, in which each only focuses on maximizing their own personal profit. This perspective of corporate responsibility does not leave much space for social mobility – in the workplace or elsewhere.

However, according to the newly founded Danish investment firm Voluntas, this conception of market behaviour is terribly outdated. Indeed, Voluntas strives to 'save capitalism' from its self-destructive focus on profit maximization – and get rich while doing so. Thus, part of their investment plan is to reform capitalism by engaging equally in profit-making *and* social progress. The strategy for this renewal of capitalism is based on three simple principles that are meant to guide their investments – if a prospect does not live up to the standard set by these principles, Voluntas will not make that investment. The principles are:

1. Meaningful work for employees.
2. Gender equality in management.
3. Sustainability and renewable energy.

By changing the traditional focus of professional investment to fit these principles, Voluntas hopes to help changing the conditions of work in contemporary society. Note nonetheless that their motivation for doing so has little to do with benevolence. The ultimate goal is to get a high return on investment through these socially conscious investments.

That Voluntas' three investment principles are not just wishful thinking is supported by a number of recent studies. In regard to ecological awareness, research on consumer behaviour has found that as consumers' environmental awareness increases, retailers and manufacturers with superior eco-friendly ►

operations will benefit. Moreover, a recent study by McKinsey & Company has argued that gender diversified companies are indeed more likely to outperform competitors than those companies which are dominated by gender uniformity.

Prima facie, it therefore seems sensible to focus on gender equality and environmental sustainability when choosing investment projects. Yet what exactly is meant by Voluntas' first principle, 'meaningful work for employees'? According to Voluntas' CEO and co-owner, Morten Albæk, this criterion is based on a correlation between employee experiences of meaningfulness and motivation for the job. Working with a task that is considered meaningful makes people put in more of an effort. This raises productivity. What constitutes 'meaningfulness' is not for Voluntas to specify. That is to say, the potential for increased productivity that is part of the notion of meaningful work is not something that Voluntas aims to define in a generic way. Instead, it is up to the companies in which Voluntas may invest to document that employees have meaningful work. One manner of doing so is to change performance appraisals which only concern the instrumental contribution of an employee to her firm to conversations on meaningful work which focus on existential meaning. On the face of it, this appears to obscure matters and make it inherently difficult to instate an objective measurement of employee meaningfulness in an organisation. This seems nonetheless to be exactly the point, namely, that existential meaning is not something measurable, but a qualitative trait that ought to characterise contemporary work-life.

This then opens the question of whether Voluntas primarily focuses on knowledge workers, leaving out manufacturers or other types of business in which employee responsibilities are traditionally driven by monotonous tasks. Considering that Voluntas abstains from giving an authoritative definition of the term 'meaningful employment', this question should be answered in the negative. Ultimately, this is to be decided by Voluntas' actual investments. Still, it appears that the notion of meaningful work is primarily trending in companies driven by knowledge work. For instance, Google has for a number of years set time aside for employees to experiment with projects of their own choosing. On the other hand, it is hard to see where there would be room for developing existential meaning on the Fordist assembly line.

Where then does this leave us in terms of the overall issue of this edition of *Rationale*? Voluntas' criteria of meaningful work for employees and gender equality in management suggest a growing awareness that mobility in the workplace actually matters. When societies recognize that women deserve better prospects for advancement than they have received historically, for instance, they seem to be drawing at least partially from an assumption that employees should have reasonable material conditions to live meaningful lives. On the other hand, it seems cynical to argue that a full-time employee whose salary is too low to support a decent life for him and his family can be compensated for this by the meaningfulness of his work-tasks. Granted this line of reasoning, investments driven by principles similar to those formulated by Voluntas have the prospect of elevating the conditions of wage employees, both as to the magnitude of salaries and in terms of existential wellbeing. Moreover, one may also argue that the principle of gender equality in management can help elevating more women to the 'social class' of management.

Voluntas and other companies that are currently pushing an agenda of social awareness as part of their business plan are, in a sense, returning to the economics of Adam Smith. This is so insofar as their focus is on profit-maximization with principles that ultimately ensure positive effects of trickle-down economics and an elevation of employees in terms of wellbeing and material conditions of life. As such, if this manner of doing investments is proven to be successful, there may be ground for rejecting the one-sided focus on profitability advocated by Friedman and instead reintroduce the idea that profitability and social responsibility are two sides of the same coin. In a way, this would mean a new interest in introducing of what Friedman himself called 'the intellectual forces' to contemporary market societies. Yet whether capitalist society as a whole is amenable to such a reformation hinges on the success of these types of investments.

It seems like wishful thinking that private companies alone can solve contemporary problems of social mobility. This begets the question of which role government is to take if the business plans of Voluntas and like-minded companies are to take hold of mainstream economics. However, this kind of investment is still in its infancy, and it seems premature to attempt an answer to this question at this point in time. ▪

**"it is hard to see where there would be room for developing existential meaning on the Fordist assembly line"**

# Mobility in the Internet Age

## *Is there a new Aristocracy?*

*by* **JAUME VIVES**

Tocquedeville in *The Old Regime and the Revolution* noted that the main revolutionary centres during the French Revolution were, interestingly, also the regions where the increase in wealth and standard of living had been more pronounced during the reign of Louis XVI. Durkheim proposed in *Suicide* that mobility disturbs the natural equilibrium of society leading to some *malaise*, and there is no better example of *malaise* than the French Revolution. One question we might be tempted to ask what determines such equilibrium. The answer is not straightforward. Lipset and Bendix proposed a simple explanation: changes in the demand for performance and changes in the supply of talent. If that is the story, there is clearly one key character: technology. As development economics has showed, technological improvement has been fundamental in the development of the modern society and the overall improvement in the standards of living. However, a strange phenomenon is lurking in the shadows of the internet age; it appears that social mobility is decreasing. Or is it? Maybe the increased availability of technology in complex societies reinforces a straining towards Aristocracy, as Plato suggested.

We start by analysing what is the relation between technology and education. A report by the LSE's Centre for Economic Performance (CEP) links the decrease in intergenerational mobility in the US and the UK with the failure of the education system to ensure that familial background (especially income) does not influence educational attainment. This problem seems independent of the technological level. However, differences in technological advancement might have an aggravating effect. Consider two identical countries with different levels of technology. In the technologically advanced country the highest paying jobs require more training on average since the methods used call for a more efficient/skilled worker. *A priori* this knowledge requirement might seem beneficial since it reduces the probability that less skilled workers from better family ►

backgrounds get high paying jobs because of idiosyncratic reasons (nepotism, for example). On the other hand, though, a new problem arises. If different families have access to different kinds of education (private, public, international…), then what prevents richer families from making sure that their children acquire the necessary skills no matter what is their natural ability?

Interestingly, this bias due to technology does not entirely depend on the nature of the education system. If everyone had access to the same exact education, assuming that the number of places to learn the higher skills is fixed and smaller than the number of students; there would still be two problems. Firstly, incentives would play a very important role in the decision to learn the necessary skills to be at the frontier of technology. Successful parents might want their children to follow their path and are more likely to provide them with the necessary incentives. Secondly, and most importantly, the selection effect would be decisive. Students with higher natural abilities might replace students that in a more 'unfair' system might have achieved higher levels of education. This is not necessarily favourable. With time, only the children that are on average more skilled, probably because of better genetic material if their parents were also highly skilled, will be able to acquire the necessary knowledge. This convergence towards a highly skilled class might lead to the creation of what we might be tempted to call a Platonian Aristocracy. In that hypothetical scenario the divergence between classes would emerge entirely from natural selection. But, how is the less advanced country any different? Primarily, the selection effect is weak, since the natural ability required for learning the new technology is closer to the ability of the median citizen.

Alternatively, if the education system depends entirely on income, we still have the two effects. The necessary high skills will be skewed towards the high end of the income distribution in both countries. But, in the rich country, the possibility of borrowing and saving for a greater proportion of the population will allow the students that believe they can be at the frontier of knowledge to acquire the new skills independently of their current income. This effect (mostly meritocratic) is less present in the less advanced country in which only a subgroup of the population has access to higher education due to the financing constraints. Hence, even if social mobility is higher in the rich country, there is no strong convergence towards an Aristocratic state in the poor country. This adds an interesting point to Lucas's classic human capital growth model; it seems that growth in highly skilled countries might lead to less mobility over time. The reasoning behind it is that the increases in income per capita over time are unevenly distributed to the more efficient workers.

For example, we might be able to understand better the distribution of positive spill-overs due to foreign direct investment. A study on the manufacturing sector in Morocco showed that the FDI effect was proportional to the technological gap between the investor and the domestic country. In this scenario it was shown that the introduction of a new technology required the training of new workers, but that the selection of which workers to train was in some way arbitrary due to asymmetric information (the foreign country doesn't necessarily know the natural ability of the workers). Similarly, as with our hypothetical advanced country, in the future generations the children of these better trained workers are more likely to participate in the sector promoted by the new technology. So far we have showed two interesting effects. On one hand, in advanced countries, there might be a push towards meritocracy independently of the educational system. On the other, in less advanced countries, social mobility might be influenced by foreign direct investment. Although these considerations mainly affect inequality in the short run, in the long run the creation of new social classes will lead to a reduction of social mobility between classes.

To conclude, the phenomenon can be explained over time in terms of supply and demand of talent. In the first generation we introduce technological progress that leads to a change in demand of talent. The supply of talent will then change in two ways: either by straining towards the more resourceful families that can afford to train their children or by mirroring the natural distribution of ability. The difference between the information revolution and the industrial revolution is that nowadays the natural ability is more important as the number of high skilled jobs increases. Since the main determinant of natural ability is genetics and education, this adds a further layer of selection to the progression of social mobility which leads to the empirical decrease of mobility in advanced countries and higher inequality in less advanced countries. The question remains whether this trend will continue until we reach a more aristocratic state and, maybe more interestingly, whether this effect is actually detrimental for society. ▪

**"in the long run the creation of new social classes will lead to a reduction of social mobility between classes"**

# Technology as a Complement or Competitor?

## *Directed technical change and the mechanization of labour*

*by* **TRAVIS JAMES**

At first glance, the idea of technological progress in the simplest sense appears both harmless and universally beneficial. The development of machinery and the application of scientific knowledge for practical purposes and simpler, more convenient processes seems to be a net gain in any context. However, with recent economic theories and societal developments shedding light on the negative externalities of this phenomenon, the overall impact of high-tech innovation is less clear. The positive effects are fairly evident. From the ease of communication and increased access to information via smartphones, to buying groceries and taking out money with self-checkout machines and ATMs, certain inventions make our lives easier. While these conveniences provide an objective good in this sense, many come at a social cost.

To grasp the detrimental impacts of industry applicable technology, one must consider two effects. The first is that new machines allow for the mechanization of low-skill jobs, leaving certain workers replaced by their machine counterparts. The best option for these individuals is to be retrained or switch industries, but these options are not always available when age and varying market demands for unskilled labor are taken into account. Second, current technologies allow for more advanced building blocks and stimulate the development of future technologies, accelerating this process and confounding the issue even further. Thus, while reduced checkout times and access to entire textbooks in the palm of our hands is nice, one has to wonder about the welfare losses for the cashiers and librarians who are put out of work.

With that being said, the idea of mechanization of human labor has actually been redefined in recent history. As Daron Acemoglu writes in his publication for the National Bureau of Economic Research titled "Technology and Inequality", "…the idea that technological advances favor more skilled workers is a 20th-century phenomenon. In 19th-century Britain, skilled artisans destroyed weaving, spinning, and threshing machines during the Luddite and Captain Swing riots, in the belief that the new machines would make their skills redundant." In the past, machines that could be operated by the unskilled and relatively less educated eventually replaced craftsmen that needed years of training to produce specific goods. However, the 20th century saw a shift to more complementary technology for skilled workers that in turn increased the skills premium. This is where the idea of technological advancement within the neoclassical economic models comes into question.

For years, researchers have viewed technological innovation as exogenous, or deriving from advances in science and entrepreneurial activity that are determined outside the scope of traditional economic theory. Yet, this doesn't provide much in the way of explaining the movement from skills-replacing to skills-biased technology. This is where Acemoglu makes a key distinction. "The first step in the argument is the realization that technology is not simply an outside force acting on the labor market and wage inequality. Rather it is an outcome of the decisions made by firms and workers, in the same way as the level of employment or wages are. In other words, technology is 'endogenous.'" This specification, that technology is endogenously determined by the profit seeking motives of firms, helps to explain this shift. In the 19th century, urban immigration in the UK increased substantially as rural farmers and Irish families moved to the cities in search of opportunity. It was thus in the firms' best interest to come up with machinery that could complement this new, relatively unskilled labor force and cut time and monetary costs associated with traditional skilled artisans. With the arrival ►

of the 20th century and advancements in pedagogy and increasing access to education, the supply of skilled labor began to steadily increase in the UK and around the developed world. Thus, skills-biased technology was created and firms began to augment these individuals' abilities with profit generating innovations. This phenomenon is especially pronounced in the last 30 years, during which the supply of skilled labor and the rate of hi-tech innovation have both surged. It follows that a large market of skilled workers creates a large market for skills-biased technology, and the profit seeking motives of firms and institutions raises the skills premium in accordance with the increase in skilled labor.

Now, it is certainly logical that firms utilize high-tech innovations to get the most out of a skilled labor force. It is also easy to see that these innovations yield unskilled labor as redundant. Take the field of computer science, for example. Companies such as Google, Amazon, Microsoft and Facebook have been pouring in resources for professionals with programming and software development skills. The revenues for both parties end up being substantial; as the corporations develop further technologies and gain insights on consumer behavior and social interaction, the workers themselves get rewarded handsomely for their efforts. In order to cut costs, however, many companies are employing these individuals, along with teams of engineers, statisticians, mathematicians and the like, to automate processes to decrease their payouts to labor and increase their margins. As a result, jobs such as bookkeeping, warehouse management, telemarketing, etc. are seeing their future prospects dwindle.

Furthermore, this begs the question of what kind of labor is replaceable. NPR has developed an interactive program based on University of Oxford research that says there are four key features that determine if your job is automatable within the next two decades. The characteristics are as follows:

- Do you need to come up with clever solutions?
- Are you required to personally help others?
- Does your job require negotiation?
- Does your job require you to squeeze into small spaces?

If the answer to any of the first three is no, or to the last question is yes, then the specific job is more likely to be automated. There are a few interesting points to be made about the study. First, the jobs that are least likely to be mechanized have a certain degree of creativity and human interaction involved. It makes sense that a robot cannot simply write the next great piece of fiction (Writers and Authors have a 3.8% chance of being mechanized), or to snap a photo worthy of the cover of National Geographic (Photographers 2.1%). It is the human element that is particularly interesting, though. Specifically, every profession associated with Management has less than a 10% chance of being automated according to the study. And the profession with the lowest chance of being replaced by machines? Mental Health and Substance Abuse Social Workers (0.3%). Therefore, it appears that both creativity and clever problem solving coupled with a routine interaction with other humans is enough to keep one's job safe from automation, for now. As it turns out, an understanding of the human condition may turn out to be the most crucial feature of one's future job security.

This leaves us with one final question: what will happen to all this unskilled labor? There's a possibility that we could eventually enter an era of leisure. As John Maynard Keynes originally anticipated and the Japanese Sociologist Ikutaro Shimizu later echoed, there is a chance that if automation and robotics reach a level where humans are pushed out of the production and distribution of goods, then they are essentially freed from the production cycle as a whole. This would leave them free to do what they want, instead of what they must. Of course, this is based on some incredibly far-reaching assumptions. The gains from innovation and increased productivity would need to be evenly dispersed throughout society for such an occurrence to take place. With the owners of capital likely ►

appropriating an uneven amount of such returns, and low-income individuals in effect losing out, concerns over the likelihood of this phenomenon are well grounded. Still, an economy needs consumption and some degree of market interaction to continue churning, and some form of redistribution may be inevitable at a point. Thus, the overall outlook remains ambiguous.

In addition, while technology has proved to be flexible in meeting the demands of the skilled working class, unskilled labor is also amiable in its own right. There are limitations to the tasks that robots can perform, and in particular their sensory capabilities are still far behind those of their human counterparts. According to Kevin Drum in a recent Mother Jones article titled "Our Computer Overlords", improving sensory recognition of machines is a technologically costly endeavor, and still nowhere near that of a human. Thus, while we are at a level of automating many jobs, humans are still cheaper to employ and may flow to other unskilled positions because of their cognitive intangibles.

At the same time, none if this is to say that skilled jobs aren't at risk of mechanization as well. Paul Krugman has been vocal about the possibility of machines taking over even some of the most skilled positions. Algorithms have already shown promise in analyzing legal documents at a much faster rate than attorneys, and even engineers themselves have been shown to be less efficient in chip-design than software programs. As the aforementioned Oxford University study notes, about 50% of the jobs in the United States are at serious risk of being automated in the next 20 years. The welfare implications could be tremendous, and it appears that it's no longer an issue simply affecting the unskilled and financially constrained. ▪

# M-PESA in Kenya

## *A technology for social mobility?*

*by* **VAISHALI MULLAPUDI**

Approximately 2.5 billion adults lack a formal bank account—often the gateway to a multitude of other financial services. This lack of financing makes the poor even more vulnerable to economic shocks. Many of us take for granted that we can dip into our savings accounts, take out a loan, or call up our insurance company in the case of an emergency. On the other hand, for the unbanked, job loss and family illness can prove catastrophic. Their options are more limited and much more expensive. Without the safety net of financial access, escaping poverty becomes much more difficult. Many factors exclude the poor—including lack of collateral, no credit history, and limited bank branches. Even a simple savings account can be out of reach for many. Banks lose money on small transactions, and the poor usually cannot meet the banks' minimum balances. However, the digital revolution may provide a solution. Mobile phones reduce the costs of financial transactions, making it economical to bank to the poor.

**"lack of financing makes the poor even more vulnerable"**

M-Pesa was one of the first initiatives to fill this niche and deliver low-cost financial services to the unbanked. Launched in 2007, M-Pesa works on almost any phone. Funds are exchanged via SMS messages, and customers can deposit funds, transfer between accounts, pay bills, purchase mobile minutes, send and receive remittances, cash out at various retail outlets, and access microcredit. Since its launch, M-Pesa has undergone explosive growth, with 43% of Kenya's GDP flowing through it annually and 237 million peer-to-peer transactions daily. The truly unique characteristic of M-Pesa is the ease of registering. Users only need a mobile phone and a Kenyan ID, which all citizens are legally required to have by the age of eighteen, or passport.

Crucial to the case of many developing countries is that M-Pesa reduces the costs of remittances, which was the initial motivation for M-Pesa's launch. In 2014, remittances received accounted for 2.4% of Kenya's GDP. An estimated 3 million Kenyan nationals live and work abroad, out of a total population of 44 million. The median cost of sending $100 via mobile money is $4, which is less than half the average cost to send money globally via traditional money transfer channels. Reducing the cost of remittances makes families more likely to send workers faraway to find more profitable work which promotes upward mobility.

Mobile savings are very attractive to the unbanked. One study found that among 1,232 Ugandans who saved in-kind, 75% had lost some of their savings in the previous year. These losses—amounting to around 25% of savings—are often the result of petty spending, demands of friends and relatives for assistance, and theft. Because ►

of these risks, people who have access to the formal sector reported saving three times as much in the past year as those limited to informal sectors.

Furthermore, mobile money allows households to better cope with risk. M-Pesa's short-term Pay Bill Account allows users to fundraise for a variety of purposes, including healthcare, education, and disaster relief. Furthermore, in the event of illness, crop failure, job loss, or violence, households with access to M-Pesa are able to get help faster and in larger amounts. M-Pesa can even help households cope with natural disasters, helping direct purchasing power to affected areas. Rather than having governments send trucks with food, families and friends simply sent money by M-Pesa, creating enough demand to induce suppliers to deliver food where needed.

M-Pesa's biggest legacy will be setting the stage for other forms of mobile financial technology. M-Shwari, the most famous mobile credit and savings service which uses M-Pesa, offers a richer array of services such as interest-paying accounts and loans with good credit. This was replicated in Tanzania as M-PAWA which lends money, determining a customer's credit eligibility within 30 days—a record pace. Kiva Zip, launched in 2011, is a peer-to-peer lending initiative through which over 40,000 individuals globally have contributed to make microloans to entrepreneurs in Kenya with 0% interest and no fees, using M-Pesa. M-Pesa has even launched the first cardless ATM withdrawal service, allowing unbanked users to withdraw cash from PesaPoint ATMs.

M-Pesa has disrupted more than just the banking sector. M-Kope leverages Safaricom's network to offer Kenyans low-cost solar panels, allowing many access to modern energy. Grudfos LifeLink allows rural households to pay for cleaning drinking water using M-Pesa. And

Kilimo Salama is an insurance product that insures farmers against crop failure with premiums paid through M-Pesa. It has also empowered entrepreneurship, with many small companies relying on M-Pesa for payment transactions. M-Pesa's success has nudged traditional banks to innovate their mobile banking services, resulting in transaction fees that are even lower than M-Pesa's. to solicit funds from their urban contacts.

However, the model is not always successful in all countries. In countries with developed banking markets, local banks have succeeded in providing reliable and easily accessible banking services to low-income customers. For example, the major South African retail banks

## "It has reshaped Kenya's banking and telecom sectors"

It has reshaped Kenya's banking and telecom sectors, extending financial inclusion to nearly 20 million Kenyans. M-Pesa has been especially successful in reaching low-income Kenyans—72% of users live on less than $1.25 a day and 75% are unbanked.

Additionally, M-Pesa particularly includes women who are often left out of positive technological change in Africa. The increased savings in money and time allow women to send their children to school, expand their businesses, and get more involved in their communities. M-Pesa also empowers rural women by making it easier for them

have opened up bank branches in remote areas, increasing their share of low-income customers. Formal banking options are often paired with other bank-sponsored services similar to M-Pesa's money transfer platform. Often, the poor's biggest barrier to using M-Pesa, and the other fruits of digital social entrepreneurship, is not owning a mobile phone. Of an estimated 2.5 billion unbanked worldwide, about 1 billion have a mobile phone. So while digital money may benefit some, it may not be reaching the ultra-poor. Increasing access to mobile phones could be the next step to widening financial inclusion. ▪

# Connected and Divided

## *Being left behind in the Digital Revolution*

*by* **LUKAS RAYNAUD**

There is no debate; we are in the age of the internet. The Industrial Revolution has closed shopped and clocked out, and the Digital Revolution has taken over churning the global economy. Like the Industrial Revolution, the Digital Revolution has stimulated growth by introducing new industries and markets, improving the Total Factor Productivity of the macro economy, and facilitating a huge step towards globalization. But like its predecessor, the nature of the Digital Revolution allows for absolute economic growth at the expense of distributed growth. Some will inevitably be left in the dust as others progress; countries throughout the world that are beginning to seize the stimulus of traditional industrialization are again overshadowed by the economic giants of the digitized world. The Digital Revolution has improved the lives of those with access to Information and communication technologies (ICT), but excluded those without. In both sociological and economic literature, this phenomenon is known as the "Global Digital Divide", describing the socio-economic disparities that arise between developed and developing countries and their respective access to ICT.

As of 2015, 43.4% of the world's population was using the internet. 82.2% of individuals in developed countries are users, 35.3% in developing countries, and 9.5% in least developed countries (ITU Information and Communication Technology Report, 2015). These statistics, unfortunately, seem intuitive, but a dissection of accessibility issues is still key to understanding the nature of the Global Digital Divide and formulating solutions. When assessing the discrepancy of internet usage between developed and developing countries, one becomes aware of the cost of ICT as an active barrier to the other side of the Digital Divide. These costs take on various forms, from actual hardware and software, to installation and maintenance. In the monetary sense, these costs add up, and are strictly unachievable for both governments and households in developing countries; not to mention, of course, the huge opportunity cost of learning to use ICT instead of working for household users. To even get a working ICT system throughout a country requires costly investments by governments (we can already see the notorious cyclical nature of developing countries not having the means to invest in operations that will allow for greater wealth and growth), and are simply unobtainable for LDC's. Even if the infrastructure is there, and public access is made readily available, there is still the socio-demographic barrier to contend with. Those who cannot afford personal, household ICT are more than likely unable to afford the education required to handle the public ICT available; we can see high correlation between countries with low literacy rates and low internet usage. Level of education, income, and even age provide obstacles towards ICT access in LDC and developing countries, though these socio-demographic issues are prominent across regions in developing countries as well. A briefing by the White House in July 2015 shows the vast discrepancies in internet accessibility in the United States by race, income bracket, age, and geographic location, while the same problem persists along socio and geographic groups in the United Kingdom, coining the term "two-speed Britain" in regards to its own issues with ICT inequality.

**"the disparity between the 'have's' and 'have not's' is a rather black and white case of the Global Digital Divide"**

However, the disparity between the "have's" and "have not's" is a rather black and white case of the Global Digital Divide. There are distinct levels to the Digital Divide, progressing from basic access, to effective usage, to complete social integration and measurable impact. Even across countries that have passed the first stage of the divide and have digitally revolutionized, they may still face inequalities in effective use of their own ICT. With regard to these particular inequalities, "kbps", or kilobytes of data per second, tends to be used as a measurement of a country's progress to effective ICT use. Generally speaking, a country with very low internet speed will not be maximizing the productivity of their internet use, whether as a facet of labour or pure accumulation of social capital (learning and cultural exposure via internet use). The Gini coefficient (a statistical measurement of income dispersion, with 0.0 being perfect equality and 1.0 being perfect inequality) can be used as a tool for measuring inequality in kbps across the world. UN ►

reports have shown that over the past 3 decades of internet usage, the internet speed inequality has gone down, but the coefficient flutters around 0.86 even today. There is, without a doubt, a major difference in the productivity of internet use between a country with an average speed of 16-25 megabytes per second (South Korea, Hong Kong), 2-4 megabytes per second (India, Chile, Brazil), and some with as low as 210 kilobytes per second (Cuba). These disparities mean that the economic stimulus of the Digital Revolution brought to countries with very low internet speeds was not nearly as invigorating as it was to already developed countries who had the infrastructure in place to fully realize the potential and productivity of ICT. LCD's and developing countries, still trailing behind the economic superpowers of the world during the period of traditional industrialization, are yet again left in the dust of a digital economic boom they simply did not have the infrastructure or finances for prolonging the state of global inequality in an age where we are more connected than ever.

The benefits are clear: ICT leads to economic growth by introducing new industries to an economy, increasing TFP (as well as pure labour productivity), and providing accessible (and often free) education and social capital accumulation for its users. The sad and unfortunate irony is that, the countries that can benefit the most from these growth stimuli simply do not have the means to afford the costs of creating and maintain accessible ICT, and economic development continues to drag compared to the rest of the world reaping the benefits of the Digital Revolution. The goal, then, is to remove the barriers to accessibility, and then to effective use, in these countries that can benefit most from use of ICT. Though the largest issue to overcome is reaching a certain level of economic prosperity before a country can sustain its own ICT network, action is being taken to shortcut this process. Bill Gates and Mark Zuckerberg recently proposed a campaign for universal internet access as part of the UN's plan to eradicate extreme poverty by 2020. Google has launched the program "Loon", which provides internet access to remote parts of the world via balloons floating in the stratosphere. Many NGOs and NPOs work with schools in poverty stricken areas of the world to provide durable, education orientated laptops for children. Once the accessibility of ICT is there, effective use is still a concern. Literacy rates and internet usage rates are proportional; improving the education system in LCD and developing countries is crucial to bringing more and more people to using the internet, and has been an issue long before the Digital Revolution.

## "The obstacles of ICT accessibility and usage are apparent, yet not easily overcome"

The role of ICT in development economics is undoubtedly crucial. The obstacles of ICT accessibility and usage are apparent, yet not easily overcome. What is clear, however, is that it will take more than a "like" or a "share" to let this change unfold. ▪

# CURRENT ISSUES

## The Broken Mobility Ladder

*by* **ADVAIT RAO PALEPU**

In 1942, Franklin Roosevelt introduced the GI Bill which gave financial aid for small businesses, college tuition, subsistence and training costs amongst other things, to army veterans. This helped push more than 2 million veterans into higher education and more than a million people into training programs. Eisenhower introduced the National Defense of Education Act (NDEA), which provided low interest loans that reached 25000 students, 71% of whom came from families with incomes less than $6000. In 1968 the Higher Education Act implemented a comprehensive federal student aid system, and unlike its predecessors it did not cover only veterans or those pursuing higher education in math or science. The grants under the HEA as well as the introduction of the Middle Income Student Assistance Act of 1978 (MISAA) increased the number of guaranteed student loans from 1 million in 1978 to 3.1 million in 1982.

These legislative initiatives, along with strong GDP growth during the mid-20th century helped build the American middle class by increasing the college enrolment and completion rates and enabled the typical families' income to double in real terms. The sluggish growth of the past two decades and the federal and state governments' policy of cutting educational funding by 27% on average, since 2007, have left students with no choice but to borrow from private sources. Between 1959 and 2007 enrolment in both 4-year and 2-year colleges increased by 400 percent from 3.6 million to 18.2 million. The costs of attending college have risen by over 125 percent; the cost of attending private college has increased steadily and the costs of attending a college in the public sector has seen a sharp increase.

Today, nearly two-thirds of Americans make more money than their parents did but about half of them remain on the same rung of the income ladder. If we look at the bottom quintile, 80% of children earn more than their parents in real terms, yet 42% of them remain on the same rung of the income ladder. In 2011 it was reported that the bottom 35% of children, reported lower incomes compared to children thirty-six years earlier. Children from the top 5% have seen their families' incomes double since 1975, but the stagnation of wages for low income households, during the same time, has pushed the possibility of ►

substantial and widespread upward mobility, for low income households, into oblivion.

It is needless to state that both men and women benefit from post-secondary education as it protects one from downward mobility and in most cases it allows one to maintain his or her class status. For families who earn less than $25,000 a year, 44% of their college age children enrol in college; out of which 59% of the children go to community college, 4% attend a public four-year school and only 12% attend a private four-year school. In comparison, for households that earn more than $125,000 per year, the college enrolment rate is 87%. Among them, 23% attend community college, 19% attend a public four-year college and 25% of them attend a private college. A child born into the lowest quintile who does earn a college degree has a 16% chance of staying in that group and has a 19% chance of breaking into the top quintile. Comparatively, a child from a low-income background who does not have a college degree has a 45% chance of staying in that quintile and only a 5% chance of moving into the top quintile.

What this illustrates is that low income children enrol in community colleges and public colleges to a greater degree than children from higher classes since attainment of post-secondary education plays a greater role in increasing probability for upward mobility for them. Since lower income families' income has not risen, they therefore rely on financial aid, grants and loans to fund their education.

**"Today student debt accounts for 6% of the overall national debt"**

The college enrolment rates between 2002 and 2012 increased from 16.6 million to 20.6 million; most of the growth was in full-time enrolment. A substantial influence in the burst of college enrolment was the housing boom (2001-2005), prior to the Great Recession, due to the deregulation of the mortgage industry and the subsequent sub-prime loan phenomenon. The boom helped raise the average home equity by $57,965 which led to a corresponding increase in college enrolment rates amongst low and middle-income households by 24%. As a homeowners' asset value increased these households were also able to finance consumption and investments at much more ease, than before. For low and middle-income households, the average home-equity increased by $15,611 between 2001 and 2005. Minority communities greatly benefited from the housing boom as the number of blacks enrolled in school at all levels increased by 3.6 percent from 2003 to 2013. The increase was 32.1 percent for Asians and 42.3 for Hispanics over the same period.

The recession in 2008/9 produced adverse effects on the labour market; the unemployment rate rose from 6.6% to 7.7% between 2007 and 2012. While tuition costs across all degree granting institutions rose, the greatest increase was perpetrated by public institutions. and therefore number of students taking loans to fund their education increased. In 2012, 49% of first time undergraduate students received student loans; 37% of all undergraduate financial aid received ($70.8 billion) came from federal loans and nearly 57% of public four-year college students graduated with debt. Today student debt accounts for 6% of the overall national debt, of the $1.2 trillion ►

in student debt about $864 billion is in federal loans. And with the total number of borrowers estimated to be around 40 million, the average borrower will graduate with $26,600 in debt.

A distinction between traditional and non-traditional borrowers needs to be made here: traditional borrowers are those who attend four-year colleges, they tend to earn good salaries, experience favourable labour market outcomes, their default rates remain low and on average have larger balances. Non-traditional borrowers come from low-income families, attend institutions with weak educational outcomes (community colleges or 2-year degree programmes) and experience weak labour market outcomes; as a result, their default rates are higher. The median income for traditional borrowers rose to $63,100 in 2012 and the median income for non-traditional borrowers remained, naturally, lower at $23000-$25000.

Students attending 4-year public institutions experienced the largest percentage increase in the average loan amount (55%), while the smallest percentage change was at private for-profit institutions (9%). Default rates among borrowers who attend 4-year programs at public and non-profit institutions have remained low. This is because they have higher earnings after graduation, low rates of unemployment, and have the necessary family resources to help them avoid adverse loan outcomes.

Adam Looney of the Treasury Department and Constantine Yannelis found that the student debt crisis, with its high frequency of defaults, was not being driven by students with high levels of debt ($100,000). Instead the crisis was being driven by loans ($8000) made out to students at for-profit colleges and community colleges. They estimate that 75% of the increase in default between 2004 and 2011 can be explained by the surge in borrowings at these institutions. It is because students who tend to have high levels of debt attend prestigious colleges and graduate with 4-year degrees, giving them better salary and employment prospects, which helps them pay off the loans. Default rates are concentrated among students from public 2-year and for-profit colleges as they graduate with weak job and salary prospects. When they take on debt, even if the amounts aren't large, their income inflow doesn't suffice to make the monthly repayments. Of the total number of students who had fallen into default by 2013, 70% were non-traditional borrowers.

**“the access to the opportunity to move upwards is a sad state of affairs”**

Education especially, a high quality education at a 4-year institution, can certainly help in improving the chances for upward economic mobility income distribution. The access to such educational institutions must be made a priority to particularly those at the bottom of the income ladder. While upward mobility exists in America, the access to the opportunity to move upwards is a sad state of affairs. The more pertinent issue is that, when an entire generation is burdened with large amounts of debt and weak employment prospects, a definitive and exceptional policy must be implemented to address the issue, otherwise upward mobility in the United States will remain a thing of the past. ▪

# Immigration, Integration, and Social Mobility

*by* **ALBERTO MARTELLI**

Over the past few decades, immigration has become a central issue for many European countries. The prolonged stability and peace enjoyed by the EU has attracted immigrants from neighbouring countries. The fall of the USSR in the 1990s, the continued conflicts in Sub-Saharan Africa, and the more recent conflicts in the Middle East and North Africa have all contributed to the growth of this phenomenon. Eurostat estimates that as of 1 January 2014, there were 33.5 million people born outside of the EU-28, living in an EU Member State. Moreover, the annual influx of new immigrants has lately oscillated between 1 and 2 million per year.

Immigration is a sensitive issue and people's understanding of it is generally shaped by strong personal biases due to, for example, political, economic or religious views. Several populist political parties across Europe have portrayed immigrants coming to the continent as “stealing jobs” from the local communities. From an economic point of view, the massive influx of immigrants recently witnessed by many European countries has had very strong effects on local economies, including a large increase in the labour force. But the reality is that immigration can be extremely beneficial in many cases. Here, we examine the ▸

impact of this immigration on Italy, but the same results can be generalised to other European countries.

As of 2014, in Italy, there were around 5 million immigrants, of whom 3.5 million were employed. Istat (the Italian National Institute of Statistics) has estimated that Italy provides these immigrants with services such as education, social security, and public health, worth around €12.6 billion per annum. However, the state gains over €16.5 billion from tax receipts from immigrants, for a net gain of around €4 billion every year. It is evident that, at least from a purely budgetary perspective, immigrants in Italy do not place a burden on state finances, but instead contribute to its development and enrichment. Moreover, according to Istat, the birth rate in Italy is tumbling, reaching the lowest level in 150 years at 8.5 births for 1000 people. As the population grows older, the government will face huge liabilities because it will have to pay generous pension benefits to older generations. Immigration not only helps increase the birth rate, but it also helps pay pensions by creating the aforementioned surplus. Furthermore, 60% of the immigrants who arrive in Italy are less than 34 years of age, meaning that they will be a part of the labour force for at least another 32 years, thus contributing to pension payments (Fondazione Leone Moressa).

**“the reality is that immigration can be extremely beneficial in many cases”**

Mass immigration like that experienced by many European countries in the last few decades certainly creates some important integration issues by changing the social and cultural composition of a country. However, at least from an economic point of view, many countries, like Italy, tend to benefit from it. It is interesting to notice that most immigrants in Italy come from poorer backgrounds with lower levels of education and take on low-paying jobs not wanted by Italian nationals, and thus are not necessarily “stealing jobs” from the locals. Indeed, of the new immigrants who arrived in Italy after 2006, 53.5% had no more than a middle school diploma, and over 60% of the total were employed in low-skilled jobs (Fondazione Leone Moressa).

Although they make up an ever-increasing proportion of the total European population, many immigrants are still not fully integrated into European society, and there continues to be a relatively large divide between the nationals of a country and foreign citizens living in that country. According to data from Eurostat, in every single EU country except Cyprus, immigrants have higher unemployment rates than nationals, and in many cases there are stark differences between the two. For instance, in Italy, the unemployment rate for nationals in 2014 was 12%, while for immigrants it was 16.5%. The marked differences in unemployment rates between these two groups signal that many immigrants find it hard to integrate into the labour market. One of the key factors responsible for the low levels of integration is certainly the language barrier. In Italy, 60% of foreigners aren't proficient in Italian, which makes integration extremely difficult for first generation immigrants.

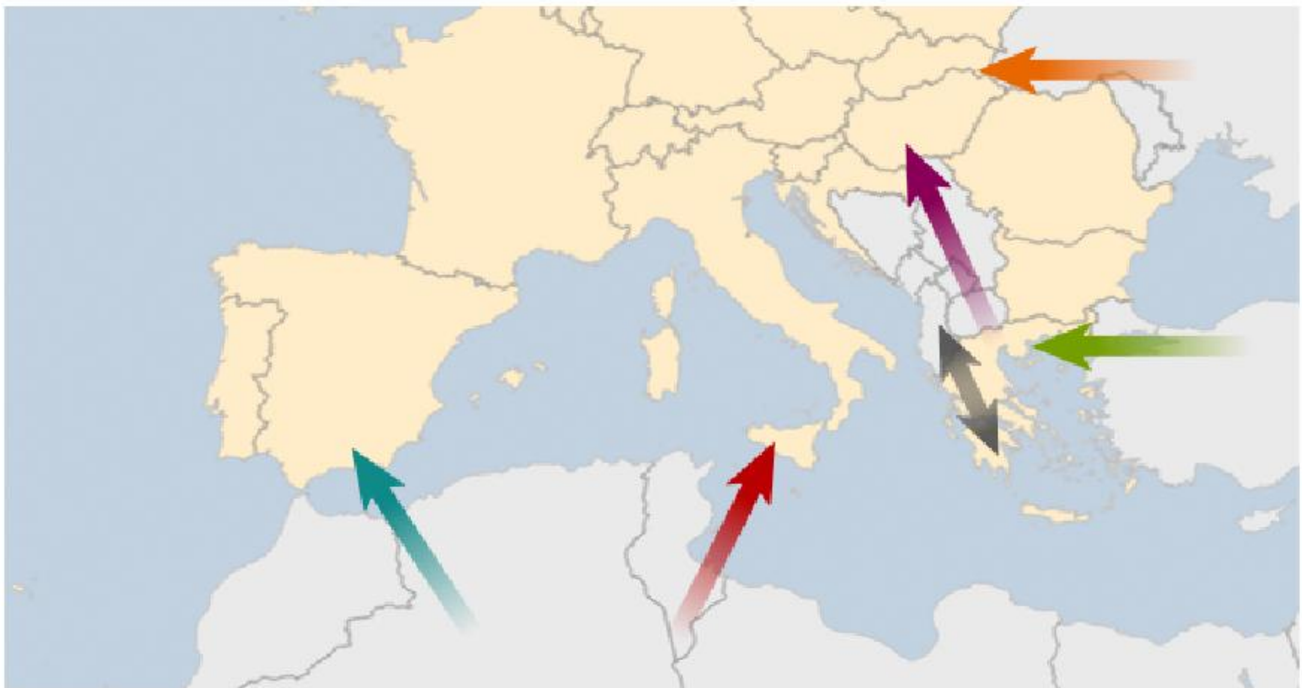
**“GDP per capita has decreased from €32,800 in 2008 to €28,400 in 2015”**

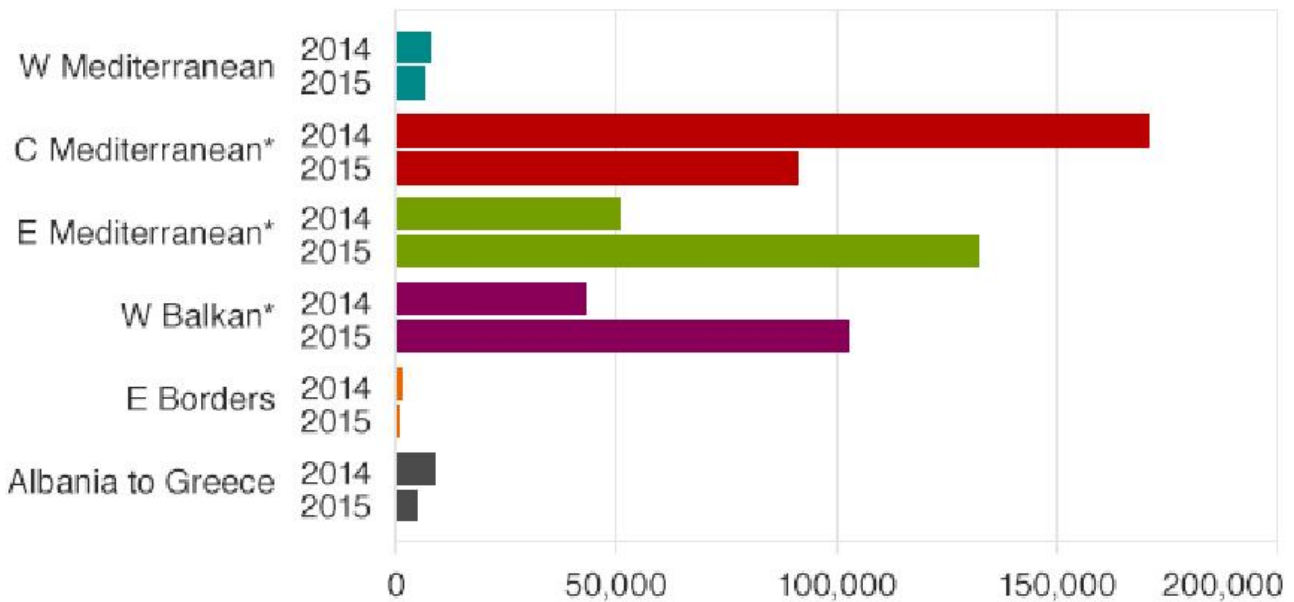
The divide between nationals and immigrants is still large and there are no signs of it having significantly decreased over the last few years. Nevertheless, within the group of immigrants living in Italy, recent studies have found strong signs of upward social mobility. According to a 2013 study, immigrants who arrived in Italy before 2001 earn hourly wages 17% higher than those earned by people who arrived after 2006. Immigrants who arrived before 2001 also have a much lower unemployment rate (14.8%) than that of those who arrived after 2006 (22.3%). Moreover, immigrants who have been in the country for longer also tend to work in more skilled jobs, because they have had time to learn Italian and demonstrate their value and qualifications to employers; the percentage of people who arrived before 2001 working in jobs below their qualification is 39%, while for people who arrived after 2001 the figure is 45%. This demonstrates that immigrants in Italy can expect to greatly improve their social conditions after spending a few years in the country. One of the main reasons for this improvement is an increase in language proficiency and a better knowledge of Italian culture.

In many cases though, upward social mobility does not necessarily mean further integration into Italian society for first generation immigrants. However, as more and more second generation Italians attend local schools, integration should improve, and the gap between nationals and immigrants should decrease. Nevertheless, the financial problems that Italy, like many other European countries, has faced in the past few years are making it very hard for it to deal with the enormous flow of migrants. Istat estimates that Italy's unemployment rate has doubled from 6% in 2008 to around 12% ►

today. At the same time, GDP per capita has decreased from €32,800 in 2008 to €28,400 in 2015. Many Italians now find it hard to get a job that matches their qualifications, and therefore upward social mobility has started to stagnate even for nationals. According to a recent study, only 16% of Italians born between 1980 and 1984 have experienced upward social mobility. Italy needs the support of immigrants to continue to sustain its generous pension system. However, neither immigrants nor nationals will be able to experience much upward social mobility until the economy rebounds from the financial crisis and starts growing again. ▪

## Migrants detected entering the EU illegally, Jan-June 2015






*Figs for Jan-July 2015

Source: Frontex

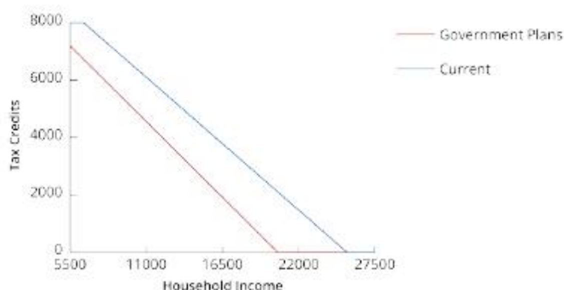
# Tax Credit Cuts

## *A road best not taken*

*by* **STEPHEN CHANDLER**

Often, it is the little political declarations that are most salient. Our Chancellor, George Osborne, set out huge and sweeping fiscal objectives that legislate a fiscal surplus by the end of this parliament (the reasons for this remain questionable). Yet it was the announcement of a cut to Working Tax Credits that resulted in a kerfuffle, so much so that the House of Lords supposedly crossed its line of constitutional propriety by voting to reject the laws enabling such cuts. The Chancellor, in one of the most radical pieces of U-turn decision-making, decided not to include them in his Autumn Statement. The commotion caused has, however, had the rather positively incidental effect of making the economics of tax credits better understood. Let's explore the reasoning behind once-proposed cuts in more detail.

Working Tax Credits are payments given to low-income workers by the government as a top-up. Historically, such payments have been welcome by economists and politicians alike as they raise the living standards of workers without passing on the cost to the employer in higher wages. The changes announced in October mean that these credits would have been withdrawn sooner (once household income reaches £3850 rather than the previous £6420) and at a much steeper rate (48p per pound of extra income as opposed to 41p). The effects of the tax credit reduction can succinctly be summarised by looking at the impact on the household income of a family with two children.




The effect of a lower threshold can be seen in the shift, 'A', on the above graph, whilst the increased rate of deduction (the "Taper" rate) can be visually seen from the increased gradient of our new line.

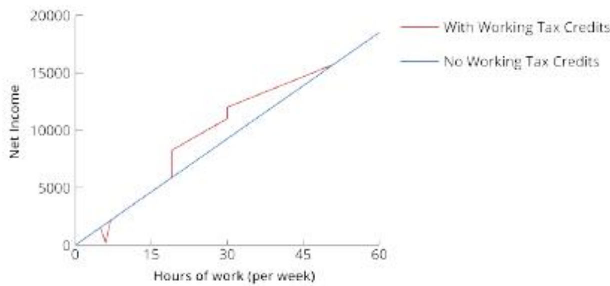
To counterbalance these effects, the Chancellor will introduce a new minimum wage from April 2016 at £7.20 an hour, rising to 60% of median wages every year. This is now described misleadingly as the National Living Wage (and no, this is not the same as the wage advocated by the Living Wage campaign as an estimate of the wage needed to cover household bills).

The country's most prominent think tanks (including the Institute for Fiscal Studies) cast their judgement against these tax credit reforms. The IFS calculated that on average, the loss to those eligible for benefits would have been £750 per year, whilst the compensation from the increase in minimum wage would have been 27% of the loss (assuming no change from GDP as a result of minimum wage changes). The Social Market Foundation has shown that whilst the increase in minimum wage can help two-earner families with no dependents, for the vast majority of cases, single-earners will be worse off.

So why the draconian cuts? There is, of course a case for fiscal saving to be made here. Employers will face the cost of the new minimum wage rather than the government. However, the reduction of the welfare bill from this announcement amounts to just 0.7% of GDP, and by the government's own estimates, the increases in minimum wage are only likely to minimally improve public finances once the dampening of labour demand and inflationary effects are accounted for. But the political message behind this reform is clear: Osborne wants a more incentivised workforce and a labour market that "makes work pay", in his own words. While ideologically this may sound decisive and cogent, the economic ramifications are not so clear-cut.

So our analysis of the proposed tax credit reform must be put through the prism of these two objectives: improving incentives and "making work pay". Looking at incentives, the issue is comparatively straight-forward, albeit a little deceptive. Common sense might lead us to believe that a reduction in government pay-outs will lead people to work more hours to compensate and increase their income. Indeed, economics identifies this as the familiar *income effect*. The opposing *substitution effect* implies that working longer hours has a higher cost (in terms of leisure time) for less pay than before the tax and so a worker will end up reducing hours. Since the tax credit system involves an injection of cash at a certain income level and then a tapering off of this injection as income takes over from credits, we end up with a "bunching" effect – it makes most sense to work just at the level at which the injection is given. At ►

the current minimum wage (£6.50) this stands at around 19 hours a week, shown below:




It is this "bunching" effect that is the most problematic issue with the UK's current tax credit system. However, the solution that was initially proposed by the Chancellor did not tackle these disincentives. By merely reducing income thresholds and increasing the rate of deduction, tax credits would begin to be withdrawn once we only reach the 10-hour level of work per week. After those 10 hours, there is an implied tax of 48% for every extra hour worked, which naturally encourages shirking. The Institute for Fiscal Studies even calculated that a lone parent earning above £11,000 per year and still receiving tax credits would've faced an effective tax rate of 80%. The government is currently and elsewhere on a mission to simplify the welfare state to introduce a gradually increasing tapering rate via Universal Credit, removing these perverse work incentives associated around this "bunching" effect. But these earlier proposals completely undermined that aim.

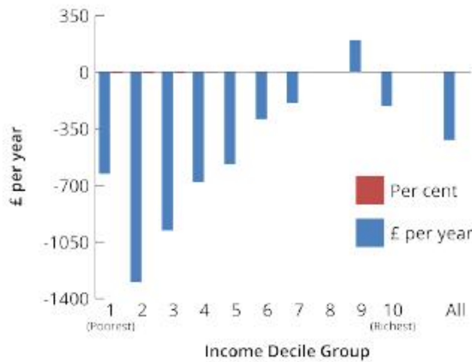
It is when looking at "making work pay" that the issue becomes cloudier and complex; not only because of a lack of empirical evidence. The Chancellor most definitely sees these cuts as tackling the root cause of what makes tax credits necessary in the first place: the prevalence of low-paid work. In other words, tax credits appear to be keeping wages lower than what they should be because they act as a subsidy to employers. In the United States, a criticism of the Earned Income Tax Credit (or EITC) is that it allows fast-food corporations to pay workers less than their "correct" wage because the government pay-out fills the gap between income earned and income needed to live. However, in the UK, this argument lacks the empirical evidence needed to really substantiate it. Firstly, it is hard to establish what the "correct" wage in a market should be. It may seem obvious to take a "living wage" as what should be expected in a market. Yet firms pay workers according to their marginal output, not some pre-ordained level to provide a certain standard of living. It is not a company's responsibility to ensure that their workers are meeting a social standard of living. The only case in which we could argue that there is a genuine "subsidy" in place would be if we were dealing with monopsony markets –i.e where firms had enough power to set the wage rate below the marginal product of their workers. Looking at the UK however, the evidence for this is scant. According to the New Policy Institute, almost half (47%) of Working Tax Credit goes to workers in retail, care and hospitality, with a further 20% going to public sector workers. It seems very unlikely that these industries in which tax credits are most prevalent are characterised by such market power.

A more plausible explanation for the amount of low-paid jobs comes from looking at the UK's persistently poor productivity performance. Had UK productivity followed the 1993-2007 trend, current real output would be more than 18% higher. Yet despite an apparent recovery from the recession, productivity has failed to match this upward trend. The argument for low wages resulting from poor productivity in the UK is as follows: tax credits allow employers to keep wages low, NOT because of malevolent corporations choosing to keep wages low, but because there is little incentive to improve productivity. Reducing tax credits, together with increasing a minimum wage, increases labour costs and has the rather salutary effect of improving productivity through automation and cost cutting. The *Financial Times*' Martin Sandbu argues that what George Osborne was trying to achieve through tac credit cut has been done in Sweden: strong unions keep wage rates high, forcing the private sector to increase productivity to make higher wages at the lower end of the pay distribution more affordable.

Yet in increasing the minimum wage and reducing tax credits, there will inevitably be huge distributional impacts. The main problem with this policy was that it mismatched the poorest households with minimum wage workers. There is a discrepancy between workers with the lowest household income (used to determine tax credits) and those on the lowest pay (minimum wage earners). This might appear rather counterintuitive. Surely those on the lowest pay are in houses with lowest income? Not necessarily – those on minimum wages are more likely to be second earners in a household with partners or family on substantially higher incomes (such is the case with students and teenagers on part-time jobs). Those on tax credits are more likely to be part-time workers, often single-parents. According to the FRS, only 37% of minimum wage workers claim ►

any form of benefits. A distributional analysis of potential changes to minimum wages and tax credits as considered by the Chancellor by the Institute for Fiscal Studies confirms this:

*Estimated Distributional Impact of Tax and Benefit Changes announced in current parliament for 2019-20*




The policy was clearly mismatched – those in the lowest household income deciles stood to lose the most, since their loss would not have been compensated by the higher minimum wage. Those set to gain most from the increase in minimum wage, remarkably, would have been found in the higher household income groups.

It does seem rather unjust that those at the lowest income levels would have lost so disproportionately. Yet look at our earlier argument that a higher minimum wage could improve productivity levels and lead to higher average pay. If that is indeed the case, then this can well be achieved without reducing tax-credit payments. That is, by keeping tax credits fixed and increasing the minimum wage, we would expect to see similar effects. The main benefit of the Chancellor's package of tax-credit cuts and a higher minimum wage was not even contingent on tax credit cuts. So why not just raise the minimum wage, and wait with the tax credit cuts? This could, according to Osborne's own logic, boost productivity and potentially raise wages across the income scale and is exactly the basis of the Chancellor's subsequent U-turn on this policy.

This tax credit debacle raises a much wider question familiar to most high-income countries: what is the correct policy to tackle technological improvements reducing the productivity of the most unskilled? We can either choose to ignore it, accepting whatever future inequality comes our way. Or we can raise minimum wages and bite the bullet of unemployment that could ensue. Ideally, a considered minimum wage increase with state subsidies to incentivise work for families with children is best. This is exactly what the UK had. There was no reason to throw this away in the name of murky ideology. The Chancellor acted correctly, albeit carrying the political cost that inevitably comes with a U-turn , in not targeting the poorest in society in the name of a fiscal saving. ▪

# The Hukou

## *Then and now*

*"If we were a market economy, the problem of population would sort itself out and resources would flow more evenly. But China is not a fully market economy and a lot of resources are still concentrated in the hands of certain cities. Under these circumstances, we can never have the free movement of the people."*

**Hu Xingdou**

(Economist at Beijing Institute of Technology)

*by* **NEHA BASU**

Systems of population registration have existed in various forms around the world, from the *'propiska'* in the Soviet Union to the *'koseki'* in Japan. The Hukou system in China, however, is unique insofar that it served wider purposes beyond population registration. Unlike a national passport that serves the purpose of identification for security purposes and record keeping etc., a hukou identifies one based on one's birthplace and influences their access to public services like healthcare, education, transport etc. subject to one's origins within China. While seemingly similar to social security systems in the US, a hukou delineates between classes of workers within Chinese society and determines their entitlement to state-controlled benefits based on these characteristics.

The hukou was introduced as part of the Communist Party of China's 'Great Leap Forward' campaign. With the rapid industrialisation that engulfed the Chinese economy, it was estimated that the influx of migrants from rural to urban areas would be too large to control. Thus the hukou system, a regime that regulated rural-urban migration, was born. The idea was that controlling migration enabled cities to ▸

develop gradually without augmenting crime rates and the emergence of slums.

The hukou was not originally designed as a mere means to distinguish rural and urban populations; included in the scheme was a demarcation that was based on professional attainment. There were four different types of Hukou, each a combination of two types of classification: agricultural versus non-agricultural and local versus non-local. The non-agricultural hukou entitled one to state-subsidized food grain and better housing, among other benefits, whereas the agrarian population was assumed to be largely self-sufficient. The provision of state-subsidised socio-economic benefits for non-agricultural hukou holders made these non-agricultural hukou highly desirable, much like the urban hukou today. However, in the mid-1990s, as part of the broader shift from command to market-based economic policy, the government put a stop to food-grain rationing, and the distinction between agricultural and non-agricultural hukou was phased out. Nonetheless, a distinction based on geographical origin was maintained.

**"one of the primary criticisms of the hukou is of its distribution"**

A rural/urban hukou, as recognised after the reforms eliminated the demarcation by profession, enabled its holder to access key public services only in the local area where she was originally from. Given the rapid pace of development has China has and continues to undergo, there has been increased migration to the cities in order to take up the multitude of new jobs created in China's booming urban centres. However, having a rural hukou means that rural migrants do not enjoy the same benefits as those possessing an urban hukou. Exclusivity in access to services is not only limited to first generation migrants, but also affects their children, regardless if they were born in the city or otherwise.

Thus, one of the primary criticisms of the hukou is of its distribution; specific criticisms target its inheritability. A child's hukou is determined by that held by her parents. This has profound implications for how the rural-urban divide has been shaped throughout generations.

While an announcement by China's State Council in 2001 made provisions for nine years of compulsory education for migrants' children through public schools, many families do not have the incomes to support this and further levels of education for their children. The inefficient and incomplete implementation of the decree has led to discrimination between migrant children and children with urban hukou, with many local governments failing to accommodate migrant children in public schools. In the local municipalities that have implemented this rule, migrant children are discriminated against in urban schools, which tend to charge them a higher fee that is often unaffordable. As a result, many migrant families in cities are fragmented as the working parents send their children back to the countryside to live with their grandparents and attain an education there, where the schooling is decidedly inferior to that in the cities.

Apart from inheritability, the urban hukou can also be awarded through merit. While before the 1990s the decisions regarding the granting of urban hukou classification were made by the central government, which regulated the number and allocation of these urban permits, during China's transition from a centrally planned economy to a market economy, greater power was devolved to local governments. This enabled the local governments to smooth urbanisation over towns and smaller cities by encouraging the urban mobility of rural ►

workers. They could in this way reap the benefits of urbanisation and simultaneously create a self-sufficient economy, boosting growth in the coming years.

In fact, it was easier to earn the urban hukou by moving to a smaller urbanised city than by migrating to major cities across the country in the post-reform period. However, there was a catch in this devolution of powers for the recipients of the urban hukou. Accepting an urban hukou meant renouncing ownership rights over land, which migrating rural workers relied on for insurance in the event of failing to 'make-it big' in cities. Government appropriation of this land seemingly took the choice of migration away from these people. Upward mobility came with a very high potential but often realised cost.

It is evident that, while the hukou has allowed cities to develop gradually, permitting welfare systems to mature, the system's effects have been tremendously uneven on the population, especially for children. Thus, in reforming the hukou, there are many considerations that the Chinese government must keep in mind. While a complete overhaul of the system may seem ideal, it is crucial to remember that the logistics of such a process could have chaotic consequences. Complete slackening of the hukou system will put immense pressure on the government's resources and lead to poorer access to services for everyone. A gradual relaxation of the hukou system would be more appropriate to minimise the strain on housing and services. Additionally, the impact of the change in the system on inequality at the rural-urban level is at best ambiguous.

**"Complete slackening of the hukou system will put immense pressure on the government's resources"**

Despite this, China has witnessed continued rural-urban migration over the last 20-30 years. As of 2014, 54% of China's population lives in cities, of which 36% possess an urban hukou. Clearly, the attractions of the gains in income from moving to cities outweigh the losses in land ownership.

On July 30, 2014, China's State Council announced plans to abolish the hukou. However, resistance to reform on the part of the local governments persists. While China's rural and urban-migrant population have been proponents for the hukou abolition, local governments enjoy the support of permanent urban citizens who benefit greatly from the socio-economic provisions tied to the urban hukou. The loyalty of these citizens to their government and the fear of over-strained public welfare systems leading to less access to services makes hukou reform a challenge to implement. Alongside pressures against reform from the urban population, local governments are disinclined to alter their policies, given that discrimination against migrants persists in reality, even if it is not entirely evident in the data. Hu Xingdou, an economist at Beijing Institute of Technology, claims that, *"In calculating GDP, the contributions of migrant labourers are counted, but on a per-capita basis, the migrant population [which is not officially living in the cities] does not appear. Therefore, when considering their performance metrics, city mayors aren't inclined towards hukou reform."* It remains to be seen how exactly China will proceed but it seems to be the case that change is imminent. ▪

**"Upward mobility came with a very high potential but often realised cost"**

# Back to Basics

## *The role of agriculture in structural transformation*

*by* **LUCA DANN**

One of the most undisputed facts about economic growth is the crucial role played in the process of economic development by structural transformation, by which I mean long-run shifts in the sectoral composition of an economy's labour force. As is true for a number of so-called "stylized facts" of economics, however, it is extremely tempting for a relative newcomer to the discipline such as myself to wallow in the heart-warming feeling that comes with taking things as given, thereby failing to recognize that the same "fact" may play out very differently and carry different implications depending on the context we are viewing it in. Particularly, looking more in detail at the way ►

structural transformation has been unfolding in particular areas of the developing world can tell us a great deal about what types of policies go in the direction of stronger and more inclusive growth.

Structural transformation is most commonly referred to in the literature as the reallocation an economy's labour force from low-productivity sectors to higher-productivity ones, a process that is particularly pronounced in competitive settings where wages more or less reflect productivity. The outcome of this transition is an increase in overall labour productivity, a result which can easily be shown mathematically but that is also fairly intuitive: after the transition has taken place, less of society's labour goes to waste in formerly unproductive sectors. Yet if workers truly do reshuffle across sectors until diminishing returns drive sectoral wage gaps to zero, structural transformation should play only a negligible part in aggregate productivity growth for those countries in which labour markets clear more smoothly. Indeed, economists Margaret McMillan and Dani Rodrik find that in most developed countries, intra-sector components account for the lion's share of overall productivity growth. It is instead in the developing world, where large cross-sector productivity gaps exist, that the potential for labour mobility to engender growth is highest.

The historical pattern of growth-enhancing structural transformation in what today are developed countries is well documented in a study by Italian economists Margarida Duarte and Diego Restuccia. They map their GDP per capita to employment shares in agriculture, services, and industry, using a sample of 29 countries with data points from 1950-2006. Their main finding is that the share of the labour force engaged in agriculture steadily declines as a function of per capita income, while the share in services slopes upward. Manufacturing appears to follow an inverted U-shaped pattern, whereby the employment share increases for low levels of GDP per capita, then falls for higher levels of economic development. The authors justify this pattern by appealing to the stylized fact that preferences over physical goods and services are nonhomothetic, that is to say as consumers become richer, they demand more and more services relative to goods. This would explain why the decline in the industrial employment share is matched by an unrelenting increase on the service side. A different study made in 2014 by McMillan and Kenneth Harttgen find that a sample of African countries appears to broadly fit the same pattern over the period ranging 1990-2005.

As unambiguously beneficial as all this may seem to be, certain nuances in the way structural transformation is currently playing out in the developing world can be a serious cause for concern. Two features stand out as particularly worrisome. The first is what Dani Rodrik has called a "premature de-industrialization" of developing countries in a paper written in 2013. Rodrik reports a decreasing global trend in industry's share of employment and output, something that should come as no surprise for advanced economies. In low- and middle-income countries, however, the fact that the bulk of workers moving out of agriculture is bypassing industry and feeding the service sector forecloses what is empirically found to be one of the main channels for cross-country convergence in GDP per capita, that is to say productivity growth in manufacturing.

**"a strong industrial sector can lead to the formation of a compact working class"**

Building on Europe's experience at the turn of the twentieth century, Rodrik's paper makes the further, ►

and subtler point that a strong industrial sector can lead to the formation of a compact working class, clustered around shared interests and with the critical mass required to veer a country's politics in the direction of a more democratic rule. Post-rural societies that miss out on this step of industrialization are, by contrast, likely to remain fragmented, and therefore be less resilient to authoritarian pressures by economically or militarily powerful elites. In Sub-Saharan Africa, where urbanization over the last half century has primarily been driven by petty services sectors, such an issue cannot easily be overlooked, especially in light of the turbulent political situations of countries in this region.

The second reason for cautiousness when evaluating the global process of structural transformation relates more closely to the issue of poverty in low-income countries. The Asian Development Bank released a working paper in 2013 in which it tracked the evolution of output and employment shares in agriculture for a group of thirteen Asian economies. Its main finding was that, while the employment index is decreasing, the share of output in agriculture is falling at an even faster rate. Simple calculations can show that this entails a decline in output per worker in the agricultural sector relative to the average - not the best news for countries like Pakistan or Nepal, which are grappling with huge issues of poverty and inequality, and where agriculture employs a fifth and a third of the workforce respectively. This trend suggests that these countries are suffering from too-low a rate of productivity growth in the agricultural sector, which would be able to sustain output shares even as workers migrate to industry and services.

It's clear that developing countries - as well as their foreign aid partners - are in dear need of policy frameworks that take issue with the way in which structural transformation is unfolding throughout the globe. Engendering a process of labour mobility that is both growth-enhancing and poverty-reducing is not the kind of thing that is achieved in a handful of years; it requires a clear idea of the path we envision for the developing world during the next few decades. Although heterogeneity across countries calls for tailor-made solutions, a common denominator for policymakers worldwide is the choice between directly fostering the growth of an industrial sector and focusing on the increase of agricultural productivity. The choice largely depends on the diagnosis performed as to where a particular country stands along the spectrum of technological development, which has implications in turn on its situation with regards to labour mobility. To what extent can an economy be defined as post-rural and be fertile ground for the flourishing of industry? It's useful to keep in mind that the industrialization of the western world was made possible by an extraordinary increase in the productivity of agriculture, a byproduct of the two industrial revolutions the historical lessons of which are too often neglected by economists, but which was of fundamental importance in generating the income to sustain the demand for newborn manufacturing industries. As agricultural productivity grows, consumers tend to consume less and less of its output as a fraction of their income, as a result of nonhomothetic preferences towards food – an identical process to the one previously described in the context of manufactures and services. This should lead to a gradual exodus of workers from agriculture into sectors that are more productive, such as manufacturing, exactly the type of structural transformation that goes in the direction of economic growth.

**"Engendering a process of labour mobility that is both growth-enhancing and poverty-reducing is not the kind of thing that is achieved in a handful of years"**

Applying this logic to the low- and middle-income economies of today makes it clear that for those countries - such as Nepal or much of the countries in Sub-Saharan Africa - the agricultural sectors of which are still too weak to sustain internal demand, efforts to increase agricultural productivity should take precedence over those to build a strong industrial sector, lest the latter end up dissolving into nothing. It takes a tremendous amount of consciousness and courage for a country to resist the lure of the rhetoric of industrialization, or post-industrialization, and to come to terms with the fact that improving agriculture is a necessary condition for any post-rural economy and society to have solid foundations. Many are the instance in which the misjudgment of countries' economic strengths and weaknesses have led them astray. The first and probably most extreme that comes to mind relates back to Italy - a country whose industrialization only came about in the post-war era, but that was dragged into a disastrous war largely on account of the fascist regime's surreal and ultranationalist narrative of alleged modernity and wealth. Everyone knows how that experience worked out. ▪

# Piketty's Panacea

*by* **HENRY MITCHELL**

Dubbed the greatest economics book of recent times, Thomas Piketty's bestseller *Capital in the Twenty-First Century* published in August 2013 has sparked widespread debate on the topic of wealth inequality and its impact on social mobility. Building on more than a decade of research, Piketty reviews the broader historical context of economic inequality and argues that the gap between the rich and the poor will widen exponentially through the 21st century. Piketty paints a rather morbid picture of the future of capitalism and inequality, giving his panacea of a global wealth tax - seen by many as utopian - but described by Piketty as better than the alternative of a return to protectionism and economic nationalism.

Piketty's methods and his controversial conclusion have seen much criticism from many influential economists around the world.

## "Piketty's methods and his controversial conclusion have seen much criticism"

This includes a rejection by many academics of Piketty's model and its suitability to predict future inequality, citing his simplification in the savings ratio and his extreme view of the substitutability of capital and labour. What do these criticisms mean for Piketty's conclusion and does the realization of his data change the state of play for social mobility?

Piketty's conclusion of creating a global wealth tax hinges on the central finding of his piece, which is that '$r > g$', where $r$ is the rate of

return on capital and $g$ is the rate of economic growth. Piketty refers to this as the 'capital to income ratio' and shows, from his data over the long-term, that this ratio increases and moreover is set to increase over time as economic growth slows. This means that the level and indeed importance of capital relative to income will grow, leading to steady concentration of wealth in society and hence more inequality. Piketty is clear to point out however that this is not a market failure, rather an inherent problem of the capitalist system, stating "it is important to note that the fundamental $r > g$ inequality, the main force of divergence in my theory, has nothing to do with any market imperfection. Quite the contrary: the more perfect the capital market, the more likely $r$ is to be greater than $g$".

However, many economists have criticized the '$r > g$' hypothesis. In fact, over 81% of economists surveyed by the University of Chicago disagreed with it. Firstly, there is the issue that data on wealth inequality is extremely hard to come by; in fact, Piketty extends his argument to the whole of Europe using data from just the UK, Sweden and France. Furthermore, Piketty provides very little evidence on the existence of growing wealth inequality in any developing countries. Secondly, Piketty underestimates the effect the diminishing marginal rate of return on capital will have on capital accumulation. If returns on capital fall quickly enough when more capital is accumulated, then the share of income devoted to capital will fall. This suggests that the capital accumulation outlined by Piketty may not occur, or at least not to the levels he predicts. Such criticism is hugely significant for Piketty's conclusion and begs the question: if capital accumulation is not as severe as believed then is there a requirement for the global wealth tax at all?

To assess this, we need to understand what the trends of capital accumulation in Piketty's data are caused by. Firstly, we are going through a stage of intense technological change, with the creation of a digital economy and the Internet amongst other things, and as such capital accumulation is likely to be intense over this period, but is this necessarily going to be true for the long run? Many economists find it hard to believe that after such a period of technological advancement the rate of return on capital can be greater than the rate of economic growth, so perhaps the rate of capital accumulation we see now is necessary for our future economic ►

prosperity. If in any case we do grant Piketty that capital does and will accumulate, does this pose a threat or is it a necessary dynamic for change? It is widely regarded that some degree of inequality is necessary for growth as it acts as an incentive to work harder, invest in human capital and as such promotes social mobility. Wealth inequality can also allow the richest in society to create corporations that provide a platform for growth in incomes and a decline in unemployment.

An increasing role of capital, however, also means that inheritance will again be a key determinant of one's life chances. In a world of meritocracy, this doesn't - and shouldn't - sit well. The social injustices that are caused as a result of wealth accumulation are fundamentally unethical. As Piketty explains, capital ownership and wealth breeds more wealth and capital ownership, due to, amongst other reasons attributable to the existing wealth, the ability to invest further and the use of financial intermediaries as well as complex tax reduction measures through the hiring of expensive lawyers and accountants. Capital accumulation and wealth therefore become somewhat of a self-perpetuating cycle. It can be seen that capital accumulation is detrimental to mobility between classes and simply serves to create a social elite.

In this case, Piketty's proposed global wealth tax would help limit the generational inequality between those with capital and those without. The need for this tax to be global is due to the temptation for owners to stow their capital in places where the tax doesn't exist and for countries to lower their tax rate (as witnessed in the case of tax havens). To this end we can observe that Piketty's global solution not only helps reduce the accumulation of capital within nations but also acts as a deterrent for the migration of capital to potential havens.

However, Piketty's tax solution is seen by many as a utopian dream as the ability to achieve unanimity on such a tax between all nations would be difficult to administrate, and politically impossible. Moreover, the practical issues of such a tax are ignored in the discussion. Tax collection, for example, would be extremely costly if done right, due to the potential need for cross-border collaboration between national tax authorities. Even by Piketty's own admission the solution is somewhat hard to achieve.

But would the proposed solution actually solve the problem? Piketty seems to neglect the potentially negative impacts that such huge taxes would have, such as acting as a disincentive to entrepreneurial behaviour and business start-ups since individuals would be less keen to build up capital for investment in new projects due to the tax. In addition, such a large tax is likely to be confronted with serious opposition both politically and amongst the public. This could lead to political instability and the alienation of potential wealth creators in the economy. Meanwhile the wealthiest will be incentivized to seek avoidance of such a tax through legal loopholes, making the tax far less effective at the expense of a reduction in wealth inequality.

**"It is widely regarded that some degree of inequality is necessary for growth"**

However, if Piketty is right about the future prospects of wealth concentration, the importance of implementing some sort of policy to counteract the divergence in capital ownership is clear – whether that should be a global wealth tax is a question for the policymakers of the day. A better solution, perhaps, would be an increase in inheritance tax on estates. This would help counter the fundamental problem of intergenerational capital accumulation highlighted by Piketty, but with far weaker effects on incentives. Capital accumulation over a lifetime is perhaps still not ideal, but certainly fairer and can prevent the kind of wealth divergence that capital accumulation over several generations leads to. Therefore, a steepened progressive inheritance tax nationally implemented – as opposed to internationally – I believe would help reduce the accumulation problem highlighted by Piketty. Of course this solution would no doubt encounter similar problems, particularly with many seeking to avoid the tax, but perhaps this would be a more feasible solution.

The evidence regarding the rate of return on capital compared to economic growth and therefore the danger of increasing wealth concentration is inconclusive, but it is important to note that Piketty highlights a key topic for debate irrespective of the suitability of his conclusions. He has collected significant data in a notoriously difficult field, which specifically shows a consistent trend of rising capital prices among large developed economies and as such policy makers would do well to keep this in mind and its potentially dangerous impacts on current and future social mobility. The panacea put forward by Piketty is decidedly idealistic. Several potential flaws in its implementation along with its political infeasibility mean that if capital is accumulating in the way Piketty suggests, other measures must be taken. Nonetheless Piketty's *Capital in the Twenty-First Century* has reignited the debate on inequality and shifted the focus from simply labour income, to a wider view of inequality - and for that he should be commended. ▪

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