Methodological Approaches to the Study of Inequality: Applied Microeconomics, Kuznets and Tilly

Paul Shaffer
Trent University, Canada
Email: paulshaffer@trentu.ca

Abstract

The paper contrasts three approaches to the study of inequality based on two core criteria: i) whether the analytical focus is on individuals, structures or social relationships; ii) whether the depiction of causal mechanisms is 'thick' or 'thin'. The first approach, applied microeconomic analysis of sources of inequality, such as wage differentials, represents the combination of an individualistic approach (methodological individualism) and 'thin' mechanisms. A second approach, that of Kuznets, adds an important dimension by focusing on structural drivers of inequality change, though the analysis of causal mechanisms is 'thin' (though richer than the popularised 'Kuznetsian' analysis, focused primarily on the 'Inverted U'). The core contributions of the third approach by Charles Tilly are to provide a much 'thicker' depiction of the underlying causal mechanisms and to integrate individualist (agency-based) and structural analysis in a 'relational' approach. It will be argued that a Tillyian-inspired analysis can provide useful insights to explain the causal forces generating recent increases in income inequality in the United States.

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1. Introduction

In recent years, there has been a very significant increase in the attention afforded inequality. A number of important texts on the subject have appeared including, *inter alia*, Thomas Piketty's *Capital in the Twenty-First Century*, Joseph Stiglitz's The *Price of Inequality* and Branko Milanovic's *Global Inequality,* In policy circles, the World Bank has moved forcefully in the direction of inequality in their 'shared prosperity' approach whereby the average income or consumption growth of the bottom 40% of the population is proposed as a core gauge of development progress (World Bank, 2015). Similarly, the new Sustainable Development Goals, adopted in 2015, now include 'reduced inequalities' among core goals. It is quite clear that inequality has re-emerged as an academic and policy priority in a very significant way.

Much less attention has focused, however, on broader methodological issues in the explanation of inequality. There is, of course, a large methodological literature on inequality measurement and analysis in economics,[1] but not a similar literature on approaches to inequality analysis across broad traditions of inquiry. The omission is important because results of empirical research on the causes of inequality are deeply affected by the methodological approach adopted. Different methodological approaches construct the causal field differently, drawing attention to different causal variables and their interrelationships. As a consequence, empirical results tend to differ, as do policy prescriptions.

The objective of this paper is to direct attention to methodological differences between three broad traditions of causal analysis of inequality in the social sciences. The approaches are distinguished according to two criteria: i) whether the analytical focus is on individuals, structures or social relationships; ii) whether the depiction of causal mechanisms is 'thick' or 'thin'. The first approach, applied microeconomic analysis of sources of inequality, such as wage differentials, represents the combination of an individualistic approach (methodological individualism) and 'thin' mechanisms. Kuznets adds an important dimension by focusing on structural drivers of inequality change. His analysis of the underlying causal mechanisms, however, is 'thin', though richer than the popularised 'Kuznetsian' analysis, focused primarily on the 'Inverted U'. The core contributions of the third approach by Charles Tilly are to provide a much 'thicker' depiction of the underlying causal mechanisms and to integrate individualist (agency-based) and structural analysis in a 'relational' approach. It will be argued that a Tillyian-inspired analysis can provide useful insights to explain certain of the causal forces generating recent increases in income inequality in the United States.

Two preliminary points should be noted. First, there is a large methodological literature on the *measurement* of inequality (see note 1), which will not be discussed given the focus on causal analysis, or explanation, of inequality. Second, the focus on methodological differences is partial and does not address other potential ways of distinguishing approaches to the study of inequality, based on ideological differences or political commitments, for example.

Before examining the approaches, a brief definition of the concepts mentioned above, namely methodological individualism, structuralism and relational approaches, is in order. It should be emphasised that all of these terms have been defined differently in the literature, and the chosen definitions map onto their usage in the present paper.

In individualist explanatory approaches, or methodological individualism[2], the analytical unit is the individual and causal analysis is based on the action, experiences or attributes of such individuals. In the tradition of applied micro-economics, individuals feature in their role as consumers, producers, labour

[1] See for example, contributions in the Volumes 1 and 2 of the *Handbook on Income Distribution* (Atkinson and Bourguignon, eds., 2000; 2014).
[2] Good critical reviews of various definitions of this term include Health (2015) and Hodgson (2007).

market participants, migrants and so on. Causal analysis typically begins with behavioural assumptions, such as the rationality postulate, and proceeds to model individual decisions taken in the context of resource constraints.

By structuralism, I am referring to approaches whereby the fundamental unit of analysis is some type of societal structure and causal analysis is based on the functioning of elements of that structure (Little 1991). Examples of structures include forms of political organisation, types of social stratification, systems of land ownership or tenure, modes of production, among others. In contrast to individuals, structures have continuity over long time periods and their functioning is independent of the particular individuals who occupy positions within them (Hodgson 1998) . Structural elements may be assigned causal force to explain behavioural patterns and other outcomes, such as when the 'logic of capital' is invoked to explain economic outcomes.[3]

Relational approaches reject both individuals and structures as the core unit of analysis and substitute social relationships or structured patterns of interactions between categories of persons.[4] In the terminology of Tilly (1999: 21), the focus is on 'bonds' rather than 'essences.' It is social relationships which themselves make up, or constitute, social structures and condition human action. In this framework, there is a bi-directional relationship between structure and agency though the exact nature of that relationship is highly contested.[5] Causal analysis and social explanation centres on understanding social relationships and the human interactions which comprise them.

The format of the paper is as follows. Sections 2, 3 and 4, examine approaches to the explanation of inequality found in microeconomics, Kuznets and Tilly, respectively. Section 5 presents a 'Tillyian'-inspired analysis to explain the rising inequality in the US. Section 6 concludes.

2. Microeconomics

The tradition of microeconomics is in many ways the paradigm case of the application of methodological individualism, as defined above, in the social sciences. The unit of analysis is the individual, in their roles as consumers, producers, labour market participants and so on. Causal reasoning in micro-economic theory draws heavily on behavioural assumptions, such as the rationality postulate. Empirical causal analysis often relies primarily on econometric analysis though there are exceptions as discussed in this section.

There are a number of microeconomic approaches which aim to explain distributional outcomes or inequality. The focus here is on the analysis of the distribution of wages or earnings in the labour market. The dispersion of earnings is one important determinant of the personal distribution of income which has received a great deal of attention in labour economics. It also illustrates well certain of the core features of the tradition of microeconomics which serve to differentiate it from the approaches of Kuznets and Tilly.

Labour market earnings differ greatly depending on the characteristics of occupations and workers, such as experience, knowledge, skills, ability and so on. A class of approaches, known as selection models, aim to explain this fact drawing on the decisions of workers to sort themselves into different types of occupations. The core assumption is that workers will allocate their skills to tasks for which they are most productive

[3] See the classic debate between Jon Elster (1982) and Gerald Cohen (1982) on related issues.
[4] Relational approaches appear across the social sciences and encompass approaches which differ in important ways, though most prominently in sociology, where there has been a rapid growth in the volume of academic work grouped under the heading of 'relational sociology' (Donati 2011, Dépelteau (ed.) 2018).
[5] See, for example, Archer's (2000) critique of Giddens (1984) from the perspective of Critical Realism.

and best compensated, given their skillsets. Otherwise stated, they self-select into such occupations. The ensuing distribution of labour income follows from such choices of individual workers.

A basic theoretical model capturing these insights may be presented as follows:[6]

Assuming that workers' choice between competing occupations is based on the objective of maximising income, then earnings for worker *i*, may be represented as:

$$y_i = \max(y_i 1, y_i 2, \ldots y_i n) \tag{1.1}$$

Consider, as well, labour productivity as:

$$y_{ij} = w_j \pi_{ij} \tag{1.2}$$

where $\pi_{ij}$is the output volume of the *i*th worker in the *j*th job, and w_j is the unit cost of worker output in job *j*. On the basis of this framework, a worker's comparative advantage can be estimated by simply examining all pair-wise comparisons of w_j/w_k with π_{jk}/π_{ij}.

An extension of this framework may be presented as:

$$\pi_{ij} = \alpha_{1j} C_{1i} + \alpha_{2j} C_{2i} + \cdots + \alpha_{kj} C_{ki} \tag{1.3}$$

where individual characteristics of workers, such as communication skills, mathematical proficiency, physical strength and so on, are represented as *Ckis* and the job-specific marginal products of those characteristics appear as *αkj*. The framework allows for marginal products of workers characteristics to vary across job types, which reflects that fact that the productivity effects will differ by occupation.

By combining equations (1.2) and (1.3), the full model becomes:

$$y_{ij} = \beta_{1j} C_{1i} + \beta_{2j} C_{2i} + \cdots + \beta_{kj} C_{ki} \tag{1.4}$$

where the marginal product of worker characteristic *k* in job *i* is represented as *β1jC1i*.

It follows from this model that workers who seek to maximise their income will select into jobs where their individual skill sets are most highly valued. It is here where they will receive highest wages. Data permitting, empirical content may be supplied to the theoretical model by estimating job and characteristic-specific marginal products and by modelling the selection process econometrically (Willis and Rosen 1979, for example). In summary, wage dispersion in the labour market, and overall inequality in labour income, are a function, of individual characteristics or endowments along with the marginal productivity of such endowments in specific jobs.

This basic selection model may be extended in any number of ways. For example, learning, sorting and matching models extend the framework by taking into account imperfect knowledge about worker skills and ability (Neal and Rosen 2000). In addition, there are other approaches to estimating wage dispersion, such as human capital theory (Becker 1975), which explains it in terms of returns to investments in education and training. Nevertheless, all such approaches are characterised by at least two common features which appear starkly in the selection model, namely:

[6] This presentation draws heavily on Neal and Rosen (2000).

1. Analysis is conducted primarily, or exclusively, at the level of the individual. In the above example, the building blocks of the model are individual maximising behaviour (1.1); individual (labour) productivity (1.2); individual characteristics or endowments (1.3) and job and characteristic-specific marginal products of individual workers (1.4).
2. The depiction of the causal mechanisms generating wage dispersion is 'thin'. In this case, it draws very heavily on tenets of economic theory, namely behavioural assumptions about maximising behaviour and self-selection into occupations which maximise returns to characteristics.

It should be emphasised that the basic selection model is not the only approach within microeconomics which examines the sources of inequality. In fact, much recent work in applied microeconomics has departed from the very heavy reliance on theory to make causal claims, as in the above example, and instead focus on empirical information about the causal system.[7] This departure has been labelled the 'quasi-experimental' turn, associated with the rapid uptake of instrumentation in econometrics (Angrist et al. 1996), along with other quasi-experimental approaches such as regression discontinuity designs, propensity score matching and so on (Panhans and Singleton 2015). More recently, a similar shift is evidenced in the so-called 'randomisation turn' associated with researchers at the Poverty Action Lab at MIT, among others (Duflo et al. 2008). Nevertheless, the critique of 'thin' explanation equally applies to these approaches which provide a limited account of the causal mechanisms generating both statistically significant parameter values in econometric models and observed outcomes in randomised controlled trials (RCTs) (Shaffer 2011, 2013).

3. Kuznets

Kuznets' classic 1955 article in the *American Economic Review* entitled 'Economic Growth and Income Inequality', provides a very different account of sources of inequality change. Analytical focus is placed squarely on structures, in particular, structural features of the economy which drive inequality change. The stylised depiction is that of an 'inverted U', whereby inequality first rises, then falls, alongside economic growth.

A preliminary point to stress is the difference between Kuznets' own analysis and the subsequent transformation of the 'Inverted U hypothesis' into 'an inevitable and unavoidable socio-economic "law"' (Moran 2005). There are many statements to this effect in the literature. One recent example is found in Piketty's *Capital in the Twenty-First Century*: 'According to Kuznets' theory, income inequality would automatically decrease in advance phases of capitalist development, regardless of economic policy choices or other differences between countries, until eventually it stabilized at an acceptable level' (Piketty 2014: 8).

Kuznets was at pains to distance himself from this sort of interpretation of his work. His 1955 article is replete with mention of the speculative nature of the 'conjectures' presented: 'The paper is perhaps 5 per cent empirical information and 95 per cent speculation' (Kuznets 1955: 26). In addition, much of the analysis involves a careful weighing of factors lending, and militating against, inequality increase. With respect to changes in upper income shares he avers, for example: '[the analysis'] yields no determinate answer as to whether the trend in income shares of upper groups is upwards, downward, or constant … a

[7] In his comparative analysis of approaches to causation in econometrics, Hoover (2008) contrasts the *apriori*, theoretical tradition associated with the Cowles Commission in econometrics with the empirical approach associated with instrumentation, natural experiments, quasi-experiments and so on.

determinate answer depends upon the relative balance of factors' (Kuznets 1955: 11). The crude structuralist interpretation of Kuznets, then, is not Kuznets' own.

Kuznets' causal analysis sought to explain the 'puzzle' of falling inequality in the United States, England and Germany by focusing on two core sets of variables namely, 'factors counteracting the concentration of savings' of upper income groups and factors related to the 'shift from agriculture to non-agricultural sectors', or structural transformation. The main 'counteracting' factors identified by Kuznets included 'legislative interference and political decisions', such as taxes and rent controls, and those associated with a 'dynamic growing economy' which militate against the perpetuation of privilege such as migration, technological change and growth of the service sector[8]. The second set of variables, those associated with structural transformation, concerned changes in intra and intersectoral inequality and population shifts.

Kuznets' analysis is structural in that the core drivers of inequality change are features of the economy and society at different levels of national income. For example, he explained increasing inequality in the early stages of growth in terms of at least five structural elements, namely:

i) the relative lack of countervailing political power to an entrenched elite (Ibid: 9);
ii) the absence of factors associated with a dynamic, growing economy and closer links between inherited privilege and economic outcomes (Ibid:18);
iii) population shifts from sectors with lower to higher inequality, specifically from agriculture to industry (Ibid: 16);
iv) increases in intersectoral mean income differences, as productivity in urban industry and services races ahead of that in agriculture (Ibid: 14);
v) population shifts, *per se*, from sectors with lower to higher mean income (Ibid: 15).

In latter stages of economic growth and structural transformation, when inequality begins to fall, some or all of these processes reverse.[9] In short, inequality change is due to structural changes in the economy and society.

Kuznets does discuss a number of causal mechanisms generating distributional change which go beyond this structural account. For example, particular importance is placed on politics, and political processes, as determinants of inequality change. He emphasises both the changing political influence of the elite in democratic societies, as reflected in the adoption of capital taxes and progressive income tax (Ibid: 9, 19) along with changes in political power of lower-income groups following urbanisation (Ibid: 17). In addition, he draws attention, to changes in the consciousness, mobilisation, and political action of lower-income groups. In fact, he assigns considerable importance to precisely these factors in explaining the turning point in the 'Inverted U', or the beginning of the decline in inequality. According to Kuznets (1955: 17):

> … a variety of forces converged to bolster the economic position of the lower-income groups within the urban population. The very fact that after a while, an increasing proportion of the urban population were "native" … meant a better chance for urbanization and adaptation, a better basis of securing greater income shares … Furthermore, in democratic societies the growing political power of the urban lower-income groups led to a variety of protective and supporting legislation, much of it aimed to counteract the worse effects of rapid

[8] Kuznets (1955: 11) argued that the service sector more meritocratic because high service income is more dependent on 'individual excellence' than in the case of property yields, for example. For the same reason, intersectoral shifts towards services were less likely to benefit high-income groups in other sectors.

[9] The decline in inequality due to the population shift per se (point v) is a 'tipping point' phenomena which is independent of changes in intra and intersectoral inequality. See Anand and Kanbur (1993) for the analytics of this process and Kanbur and Zhuang (2013) for application to China and India.

> industrialization and urbanization and to support the claims of the broad masses for more adequate shares of the growing incomes of the country.

Overall, Kuznets analysis situates inequality within the broader context of changes in the structure of the economy and society. This constitutes both its greatest strength and weakness. On the positive side, it brings into the field of inquiry issues which are undoubtedly important when explaining inequality and which are missed in the microeconomic analysis of wage or earnings dispersion. The impact of structural change in the economy is an important driver of inequality and social dislocation as exemplified by such present-day processes as off-shoring, outsourcing, technological change, the decline of manufacturing, and so on. Other forms of structural change concerning political power, institutional and legislative frameworks, also have important causal influence on inequality. These points are taken up further in section 5, in the context of the discussion of increasing inequality in the US in recent years.

The core weakness of the analysis is that the causal mechanisms generating inequality change are underspecified, or somewhat 'thin'. Kuznets readily acknowledged this point, noting that certain mechanisms, including political and social processes, were 'beyond the competence of this paper' (Ibid:. 9) and 'ventures into unfamiliar and perhaps treacherous fields' (Ibid: 29). At times, his analysis amounts to a decomposition exercise whereby overall inequality is a function of within and between group inequality along with population shifts. At other times, the underlying mechanisms of inequality change are purely mechanical or statistical, as in the case of the population shift effect per se (see note 9). Overall, there is much left to be explained in terms of the mechanisms through which structural change generates distributional change.

4. Tilly

In his influential book, *Durable Inequality*, sociologist Charles Tilly adopts a so-called 'relational' approach to explain persistent inequality. He argues against both individualist and structuralist explanations of social phenomenon, as defined in the introduction, on grounds that they have serious methodological shortcomings. His own analysis of inequality attempts to incorporate both structure and agency by focusing on social relationships between categories of persons. Such relationships are illustrated through a number of 'relational', causal mechanisms which generate durable inequality. In terms of the terminology in the introductory section, Tilly's approach represents the combination of social relationships, as the core units of analysis, with thick description of the underlying causal mechanisms.

Tilly's critique of methodological individualism generally, and applied microeconomic analyses of inequality, in particular, rests on two points. First, it is ill-conceived to base analysis on individuals, be they labour market participants, firm managers, consumers, or other. In Tilly's view '… essential causal business takes place not inside individuals heads but within social relations among persons and sets of persons'(p.33). Second, causal analysis based on individual action, experience or attributes is seriously deficient and does not adequately explain the 'how and why' (Tilly 1999: 24) of inequality, though it does have a limited role in contributing to such an understanding. It is worth quoting Tilly at length, as his critique is directed against the sort of analysis presented in section 2:

> Individualistic analyses have, however, relied on obscure, implausible, or insufficient causal mechanisms grounded in individual experience and action. They have centered thinking about inequality on the image of individuals with variable attributes who pass through a screening [or selection] process that sorts them according to those attributes into positions that give them differential awards. In various explanations, these attributes may include human capital, ambition, educational credentials, gender, race, or even personal connections, but they remain individual properties…. such an argument … fails to specify the causal mechanism by which

> [individual attributes] produce educational outcomes … Nor does it say how and why educational accomplishment, gender, and other characteristics produce their sorting effects. (Ibid: 22-23).

The critique of structuralism is similarly directed at both conceptual and causal issues. Tilly rejects 'social structures' if understood as theoretically posited entities at multiple removes from social relationships. In their place, he proposes an analytical framework based on 'collective experience and social interaction', which he labels 'the structure of inequality' (Ibid: 24). Causally, he argues that structural analyses, such as systems theories, have severe shortcomings:

> It has proved impossible either to identify those relations to larger structures concretely or to assemble convincing evidence for functional explanation of this kind. Despairing of functional explanations, other systems theories has commonly derived categorical distinctions from a vague, autonomous entity called "culture" or even "the culture". Such accounts relabel the phenomenon instead of explaining it. For the explanation of durable inequality, systems theories look like a cul-de-sac (Ibid: 21).

As opposed to individualism and 'non-relational' structuralism, Tilly's analysis is based on social relations or interactions between categories of persons, which are illustrated by an analysis of 'relational' mechanisms. Tilly considers this mechanism-based approach as a separate category of social explanation which he distinguishes from both structural and individual approaches. According to Tilly (2001:365): 'Explanation consists in identifying in particular social phenomena reliable causal mechanisms and processes of general scope.'

With specific reference to inequality, he describes this form of analysis as follows: 'In a relational view, inequality emerges from asymmetrical social interactions, in which advantages accumulate on one side or the other, fortified by construction of social categories that justify and sustain unequal advantage.' (Tilly 2001: 362). The categories assigned particular explanatory important in Tilly's framework are bounded pairs such as male/female, citizen/foreigner, black/white among others. The 'asymmetrical social interactions' involve four key relational mechanisms which generate or maintain durable inequality, namely exploitation, opportunity hoarding, emulation and adaptation.

By exploitation, Tilly is referring to situations where 'well-connected people control valuable resources from which they extract returns by deploying the effort of others, whom they exclude from the full value added by that effort' (Tilly 1999: 91). Opportunity hoarding occurs 'when members of a categorically bounded network acquire access to a resource that is valuable, renewable, subject to monopoly and … network members hoard their access to the resource, creating beliefs and practices that sustain their control.'(Ibid). The two other mechanisms play a secondary role in Tilly's framework. Emulation is the copying or transplanting of organisational models or social relations from one setting to another. Adaptation involved the development of practices and subordinate social relationships, with limited benefits for select groups, which reinforce prevailing social relationships (Ibid: 97).

Tilly cites apartheid South Africa as a stark empirical example of the four mechanisms at work. Exploitation figured prominently in that 'European masters who controlled mines and farms, compelled African workers to commit their effort to those enterprises for much less reward than the value their effort added' (Ibid: 127). Opportunity hoarding, as well, played an important role in the following ways: i) white workers held privileged positions in the labour market and actively excluded others from types of employment; ii) Asian merchants eked out, and actively preserved, a commercial niche by selling goods to African populations; iii) African labourers sought to safeguard access to jobs as migrant workers. An example of emulation was the transfer of aspects of the organisational model involved in mining to newly developed sites, including the repressive disciplinary structure, segregated living arrangements, recruitment patterns and so forth.

Finally, adaptation to aspects of the economic and social system become the norm as 'the timing of social life in African areas came to depend on the schedules of mines, mills, farms and state-imposed curfews' (Ibid: 128). It should be emphasised that such adaptation did not preclude forms of resistance to the system which simply developed alongside 'myriad accommodations' (Ibid).

Tilly's framework has generated a significant critical literature[10] to which Tilly (2000) has responded (Voss 2010). Criticism of *Durable Inequality* have been directed at the definition of terms such as exploitation (Mann 1999), the lack of attention to cultural dimensions of inequality, such as ideological and belief systems (Morris 2000, Lamont et al. 2010), the treatment of agency (Laslett 2000), the overemphasis on economic organisations, and so on. For the present purposes, Tilly's analytical framework has value in that it addresses key shortcomings of microeconomic and Kuznetian analyses of inequality. Specifically, the mechanism-based relational analysis provides a 'thick' analysis of causal mechanisms in a way which attempts to reconcile structuralist and individualist (agent-based) analyses. The following section examines whether it constitutes a useful tool in explaining increasing inequality in the US in recent years.

5. Explaining Rising Income Inequality in the US: A 'Tillyian-Inspired' Perspective

It is widely recognised that income inequality in the US has risen since the early 1980s (Piketty 2014; Milanovic 2016). The most comprehensive recent analysis of this trend is that of Piketty and colleagues (Piketty et al. 2016), who have created a database combining tax, survey and national accounts data which together account for virtually all of national income. The great advantage of this database is that it includes a much higher percentage of national income than US Census Bureau estimates or from Internal Revenue Service (IRS) sources.[11]

According to these data, inequality has increased sharply in the US since the early 1980s, when measured in any number of ways. Specifically (Ibid: Table 2, p. 41):

1. Pre-tax income growth of the top 1 per cent and 10 percent of the population increased by 205% and 121% respectively, between 1980 and 2014, compared with a 1% increase for the bottom 50 percent of the population;
2. The corresponding figures for post tax and transfer disposable income growth over the same time period are 194%, 119% and 21%[12].

The skew is even greater when including income trends for the top 0.1%. There is little doubt that income inequality has increased significantly in the US since the early 1980s.

What accounts for this rapid rise in inequality? There are a number of competing explanations. Much of the debate in the US has focused on the relative importance of globalisation and technological change (Slaughter 1999). The former explanation focuses on the effects of trade, outsourcing and offshoring while the latter on skill-biased technological change and attendant increases in the wage premium, along with the effects of mechanisation and computerisation. An explanation from microeconomics is based on the idea

[10] See in particular the Symposium in the April 2000 edition of the journal *Comparative Studies in Society and History* (volume 42, no. 2).

[11] The key disadvantage is that it relies on a number of assumptions requires for the mapping of census to survey data, for the estimation of benefit incidence of public spending and so on, as discussed by the authors (Piketty et al. 2016: 2-3, 10-16).

[12] This latter figure increases somewhat if post-tax income extends beyond disposable income to include the imputed value of all transfers and public expenditures but doesn't affect the core finding of rapidly increasing income inequality (Ibid: Figure 3, p. 44).

of assortative mating, or the increasing tendency of individuals with high earnings potential to marry one another (Greenwood et al. 2014). Other explanations include the increasing importance of the service sector, the increasing importance of capital income, changing norms with respect to executive compensation levels, and so on.[13]

The focus here, is on a somewhat different causal story. It has to do with the shift in the ideological, political and institutional context in the US since the Reagan administration of the 1980s.[14] Ideologically, there was a shift in the political spectrum in favour of freeing markets, the so-called 'neo-liberal' turn. Politically and institutionally, large corporate interests have had greater sway to shape policy and the rules of the game in ways which benefit them, but also increase inequality. The mechanisms through which such influence is wielded include, *inter alia*, campaign financing of legislators, judges and attorney generals, lobbying, and litigation.[15]

It is worth quoting at length from Angus Deaton (2017) who contrasts the different causal stories on offer:

> There are two different explanations for the divergence between median and top incomes, and it matters a great deal which one is correct. The first attributes it to impersonal and unstoppable processes such as globalization and technological innovation, which have devalued low-skill labor and favored the well educated. The second explanation is more sinister. It holds that median-income stagnation is actually the direct result of rising incomes and wealth at the top. In this account, the rich are getting richer at the expense of everyone else … Recent research suggests that there is some truth to the second story, at least in the US.

Deaton goes on to discuss a number of 'policies and processes' which illustrate the more 'sinister' explanation. His first item concerns health care:

> First, health-care financing is having a disastrous effect on wages. Because most Americans' health insurance is provided by their employers, workers' wages are essentially paying for profits and high salaries in the medical industry… A related problem is increasing market consolidation in many sectors of the economy. As a result of hospital mergers, for example, hospital prices have risen rapidly, but hospital wages have not, despite a decade-long shortage of nurses…

Other items identified by Deaton include the federal minimum wage, which has not increased since 2009, non-compete clauses and right-to-work legislation, which undermine the power of unions, outsourcing and so forth.

For the purposes of illustrating a Tillyian-inspired account of inequality, the focus will be on issues raised by Deaton concerning the health care sector. Consider first, the related issues of concentration in the hospital sector[16] and wage suppression for nurses[17]. Between 2017 and 2012, there were 432 hospital merger and acquisition deals involving 835 hospitals across the US (Cutler and Morton 2013: 1965). As a result, concentration in the hospital sector has increased by around 40% compared to the 1980s, when measured in terms of the Herfindahl-Hirschman concentration index (Ibid: 1966). Wage suppression has been facilitated by collusion in an increasingly concentrated industry where large hospitals have shared confidential wage information on registered nurses to fix wages (Rosenberg 2013). It is also, no doubt,

[13] Milanovic (2016) provides a summary of these explanations.
[14] Similar analyses are found in Reich (2015) and Baker (2016).
[15] See Bonica et al. (2013: 117) and Reich (2015: 78).
[16] On this issue, see also Cutler and Morton (2013) and Fulton (2017).
[17] See Greenhouse (2006) and Rosenberg (2013).

facilitated by the weakening bargaining power of labour due to ideological shifts and the declining power of unions. In this context, increasing corporate revenue likely takes the form of excessive wages to executives and administrators or excessive corporate profits, worsening inequality.[18]

A second issue concerns the pharmaceutical industry in the US, and the cost of prescription drugs which far exceeds that in other OECD countries (Sarnak et al. 2017). Drug prices are higher in the US for reasons related, *inter alia*, to legislative, political and judicial processes including[19]:

- restrictive patent legislation, tightened in the 1990s, and the practice of 'product hopping', whereby very slight changes to the original drug qualify a modified product for new patent protection and preclude the substitution of generics;
- legislation barring the US government from using its bargaining power to negotiate wholesale drug prices, and barring Americans from purchasing cheaper versions of the same drug abroad ;
- legislation allowing pharmaceuticals to pay doctors for prescribing their drugs;
- favourable court rulings allowing pharmaceuticals to pay generic drug makers for delaying production of cheaper versions (so called 'pay-for-delay' agreements[20]);

Such favourable legislation is no doubt facilitated by the extensive campaign financing and lobbying efforts of pharmaceuticals. For example, in 2013, lobbying costs of the industry amounted to $225 million and political contributions, $36 million. Further, the likelihood of favourable judicial outcomes is enhanced by the vast resources at the disposal of the industry, and of specific firms, to litigate contested claims.

A modified version of Tilly's relational account does seem to map closely onto certain of the processes in question, though the adaptation mechanism discussed above is less relevant. At least three modifications in the framework are required, however. First, Tilly's focus on bounded categories must be relaxed, unless the categories are broadly defined in terms of specific corporate actors and occupational categories (in the health sector) and others. Second, Tilly's production-based definition of 'exploitation' and opportunity hoarding must be expanded to include consumption and take into account practices such as monopoly pricing or restrictions on supply. Third, Tilly usually applies opportunity hoarding to non-elite groups, but it may also be expanded to cover elites, as Tilly himself acknowledges (Tilly 1999: 155).

Recall Tilly's definition of exploitation, where 'well-connected people control valuable resources from which they extract returns by deploying the effort of others, whom they exclude from the full value added by that effort'. Exploitation, in this sense, is evidenced by stagnating wages of nurses in the context of nurse shortages and increasing concentration (and collusion) in the hospital sector.

Exploitation in the 'consumption sense' and opportunity hoarding converge in the account of the pharmaceutical industry and the rents generated by the excessively high costs of prescription drugs, relative to other countries. Tilly (1999: 155) provides a good depiction of this process: 'A firm or an alliance of firms that established monopoly or oligopoly over production and sale of a given commodity …. [conducts] opportunity hoarding with respect to all other potential producers and sellers.' Such practices as 'product hopping' and 'pay-for-delay' agreements are classic examples of opportunity hoarding.

[18] See Blair and DePasquale (2010).
[19] This example is from Reich (2015: 22-26).
[20] These types of agreements have, in fact, been actively opposed by the US Federal Trade Commission though they increased rapidly in number following favorable appellate court rulings in 2005. Their frequency began to fall in 2013, after the Supreme Court ruled that such agreements could violate antitrust legislation in *FTC vs. Actavis, Inc.* (FTC 2016). It has been estimated that such agreements cost the US consumer around $3.5 billion per year (FTC 2010).

Emulation also figures in that the same processes leading to hospital consolidations and pharmaceutical profiteering spread rapidly and are repeated across jurisdictions. Similarly, in the pharmaceutical industry, pay-for-delay agreements spread rapidly until they were slowed by unfavourable rulings by the US Supreme Court in 2013 (see note 20), as have other practices such as 'product hopping'.

A 'Tillyian'-inspired perspective, then, does appear to illuminate certain of the processes in the health care sector which contribute to rising inequality in the US.

6. Conclusion

Addressing inequality is undoubtedly one of the most pressing public policies issues in many countries in the industrialised world and in the Global South. How it is addressed, however, depends fundamentally on how its causes are understood. Three causal stories have been presented which differ methodologically and substantively.

It has been argued that Tilly's mechanism-based relational analysis has certain advantages over the methodological individualist approach of microeconomics analyses of wage dispersion and the structuralist approach found in Kuznetsian accounts of the 'Inverted U' and to a lesser extent, in Kuznets. The former is unlikely to provide a satisfactory account of the broader context within which individual decision-making takes place and provides a 'thin' account of the causal mechanisms driving change. In terms of rising inequality in the US, for example, it is unlikely to capture the changing ideological and power configurations ushered in since the 1980s which fundamentally reshaped social relationships and economic outcomes.

On the other hand, many structuralist analyses are too blunt to adequately depict the causal mechanisms in question, the varied actors involved and the historical contingency of the processes at hand. Invoking the 'Inverted U' does not do justice to the complexities of actual processes of change, as evidenced by the discussion of the health sector, and may wrongly imply the inevitability of particular outcomes, such as rising or falling inequality.

Tilly's focus on mechanisms and social relationships addresses shortcoming of these approaches. It provides a thick analysis of causal mechanisms in a way which attempts to integrate structuralist and individualist (agent-based) analyses. Exploitation, opportunity hoarding and emulation do indeed have analytical worth when explaining rising inequality in the US, and what has happened in the health care sector. The nature and outcomes of such processes, however, are not pre-determined but depend on human interactions conditioned by social relationships.

As it happens, these are precisely the types of issues which Kuznets considered must be at the centre of future research on inequality though 'beyond the competence of this paper'. As he phrased it:

> If we are to deal adequately with processes of economic growth, processes of long-term change in which the very technological, demographic, and social frameworks are also changing … it is inevitable that we venture into fields beyond those recognized in recent decades as the province of economics proper … Effective work in this field necessarily calls for a shift from market economics to political and social economy (Kuznets 1955:28).

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