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# Elitist Earnings across Occupations: the White Group Effect in the US and UK Labour Force

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## Elitist Earnings across Occupations: the White Group Effect in the US and UK Labour Force

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### Abstract

Elite occupations are characterised by the magnitude of income accumulation. This paper however shows that the cumulative effects on group earnings is a pattern visible across the strata of the society. The literature on identity, stratification, and intersectionality has long shown the importance of group identity in explaining the persistence of income inequality. By taking a group perspective to individuals, the contribution of this paper is to reveal that elitist earnings, whereby one group earn disproportionately at the expense of other demographic groups at the occupational level, exist across the labour force. The case studies on the US and UK labour force show that elitist earnings is a group phenomenon, not specific to elitist occupations. There is in effect a pattern of elitist earnings across occupations for a dominant group, mainly white male or female, at the expense of other racial, ethnic, and gender groups.

Keywords: elite, income, inequality, social norms, stratification

JEL classification: J31, J71, C32

#### 1. Introduction

The accumulation of earning excesses in the financial sector is now widely recognized to be one of the features of the evolution of income distribution over the past century (Piketty and Saez, 2003; Piketty, 2014). One potential explanation put forward by Piketty and Saez (2003) is the role of norms in exacerbating earnings at the top of the income distribution. In effect, identity reinforcement and norms exacerbation at the top of managerial and financial occupations have been essential factors which have led to financial excesses. In the US and in Europe, this movement of income went towards a specific demographic group, namely white men in managerial and financial occupations (Author A; Denk, 2015). Therefore, it makes us wonder the extent to which elitist earnings exist at the group level, whereby identity groups earn a disproportionate share of income at the expense of other groups across all occupations. As such, the earning behaviour of the elite could be the visible part of the iceberg, given the extent of their earnings, which might not be linked to the behaviour of elitist individuals but to a group of individuals across the labour force. In effect, we argue here that the dynamics of income accumulation over time are characterised by group-based rather than individual-based behaviour across the labour force.

The contribution of this paper is to characterize elitist earnings according to the long-run trend of group's earnings vis-à-vis others, and to test for their existence in the US and the UK occupations. As such, the long-run trend of elitist earnings by group at the occupational level is overshooting vis-à-vis other groups, while other groups' earnings are constant over time, and hence are not benefiting from occupational income growth in the long-run. The literature on identity (Stryker, 1968; Tajfel and Turner, 1986; Ashforth and Mael, 1989), stratification (Darity and Williams, 1985; Mason, 1996), and intersectionality (hooks, 1981; Crenshaw, 1989) has long shown the importance of group identity in explaining market interactions as a subset of social interactions. As such, the 'social variables' mentioned by Arrow are in fact linked to the relationships of power between groups reflecting local cultural norms (Lamont *et al.*, 2014; Massey *et al.*, 2014). Starting from such a rich literature as a background, this paper assumes that individuals are defined at the intersection of stratified group identities whose social positioning depends on the contextual norms in which they evolve.

Accepting that group behaviour overtakes individual behaviour in the social setting leads us to rethink the way group behaviour influences income movements across the economy and the society over time. Across social sciences, despite the recognition of the importance of group behaviour, the methodology used to measure income inequality is based on the individual, whereby individual income as a dependent variable is regressed against independent variables such as education, experience, gender, race and so on (Tienda and Lii, 1987). In effect, despite being central to the issue of income inequality, membership of individuals to social groups is often ignored (Piketty and Saez, 2003; Atkinson *et al.*, 2011), or group membership excludes professional

categories (Schnelder, 2013). Taking a group perspective of individuals, this paper departs from methodological individualism and marginalism by using a long-run methodology on group earnings.

This paper is organised as follows. Section 2 provides a theoretical background. Section 2.1 describes the role of group behaviour in market interactions and in the labour market in particular, thus showing how a dominant group can persist over time. Section 2.2 then looks at the impact of time on the dynamics of income accumulation through stratification and intersectionality effects in the labour force. Section 3 elaborates the phenomenon of elitist earnings across occupations. Finally, Section 4 offers two case studies on the presence of elitist earnings in the US (1968-2011) and UK (2001-2014) labour forces looking at racial, gender, and occupational stratification. Section 5 concludes the paper.

#### 2. Theoretical Background

#### 2.1 Group Behaviour and Social Identity

The elite emerging from the changes in global income distribution over the past 50 years seems to be increasingly diverse in nature and international in scope, but most research still focuses on the supremacy of the white, male, Protestant trinity of power (Khan, 2012). The increasing diversity of the elite also means however that individuals within that group experience very different opportunities (Ashley and Empson 2016; Khan, 2012). This section goes back to the literature on identity to show how such diversity of experiences in the elite reflects, to a large extent, the experiences of individuals with different identities outside the elite group. While this section is not aimed at covering the wide range of literature on identity and group identification,<sup>1</sup> the non-exhaustive cross-disciplinary literature review presented here enables us to trace the role of social groups in defining the individual. By doing so, we are able to adopt a dynamic view of the individual at the unique intersection of stratified group identities, and whose social and economic positioning depends on the contextual norms in which they evolve. Hence, the behaviour of individuals with diverse identities within the elite group in effect results from the socially constructed group relationships at the societal level.

The concept of identity is related to the fact that individuals are attached to social categories to which they feel a sense of belonging, such as ethnicity, gender, age, sexuality, profession, culture or religion. Social interactions are central to the identity literature in sociology, especially from Stryker's work (Stryker, 1968). Such tradition departs from methodological individualism by showing the importance of relationships in shaping personal and social identities. Stryker in effect argues that the heterogeneity of identities of one individual comes through the multiple roles he or she plays in increasingly complex and diverse societies. The sociological origin of research on identity is therefore based on individual agency whereby an individual actively negotiates his or her roles and relationship with others (Casey and Dustmann, 2010). Here, the emphasis is on the two-way relationship between the individual and society and how social interactions shape personal identities. Taking these different traditions together leads us to map an individual with multiple group identities whose agency and decision-making depend on the groups to which they belong.

A growing body of literature now distinguishes between group and individual behaviour (Bornstein *et al.*, 2004; Charness and Sutter, 2012; Muehlheusser *et al.*, 2015). This literature shows that in an experimental laboratory setting, group behaviour tends to be more self-centred and predictable than individual behaviour. Bornstein and Kugler and Ziegelmeyer (2004) for example provide evidence from strategic games experiments that groups are more rational, in the sense of maximising each group player's own payoff, that they are less pro-social and make less errors than individuals. Groups behave as such by assuming that other groups will behave identically, thus triggering a self-reinforcing norm of behaviour to fulfil the group's aspiration of higher payoffs. Interestingly, since the groups in the experiments were randomly-assigned, it is impossible to know the role played by the identity of the group players in the group decision-making process. However, Muehlheusser and Roider and Wallmeier (2015) provide a clue by adding the gender identity to their game-theoretic experiments. They find that male-based and mixed-gender based groups are more prone to lying than female-based groups.

#### 2.2 The Impact of Time on Group Behaviour: Stratification and Intersectionality

The relative value assigned to social groups is mostly historically-determined and culturally embedded (Bourdieu, 1984; Prasad and Qurechi, 2016; Clegg et al., 2006). The literature on stratification for example shows how race and ethnic group disparities in market outcomes can be sustained and exacerbated over time (Darity and Williams, 1985; Massey, 2007; Grusky and Weisshaar, 2014). Social norms then serve as rules for reproducing advantages of certain social groups at the expense of others. Brown and Yang (2015) for instance show the discrepancies between the performance of female and male jockeys, a profession where men and women can compete equally, and the market value assigned to their group through the betting system. They find that women are especially underestimated in jump racing, a race category with low female participation. Here, the combined effect of professional and gender identities leads to a worse outcome for women in jump racing than in other forms of racing. Similarly, on how group advantages are also reproduced over time at the intersection of geography and education, evidence for England and Wales shows that a large number of employers offering the top-paid jobs in the country target an average of only 19 universities in the UK for those jobs (Milburn, 2012, Dorling, 2013). These examples go beyond the issue of statistical discrimination (Bertrand and Mullainathan, 2004) since group productivity in that instance, as in all occupations, has been shown not to be responsible for income inequality (Tomaskovic-Devey and Skaggs, 1999). The problem of the combined effect of identities on inequality has been formalised in the literature on intersectionality.

The literature on intersectionality argues that the sum of identities can lead to worse discriminating outcomes than considering identities separately (hooks, 1981; Crenshaw, 1989; McCall, 2005). Compared with implicit discrimination, which argues that discriminatory behaviour by individuals may be unconscious (Bertrand et al., 2005), the concept of intersectionality departs from methodological individualism by rejecting the boundaries that can possibly be drawn between groups. This stream of research originally comes from black feminism as a critique of traditional feminist theory which tends to consider all women as a single group regardless of the fact that combining gender with racial and class identities may lead to different discriminatory outcomes. From this perspective, group membership is socially assigned by a dominant standard, as shown in the next section, rather than individually chosen, consciously or unconsciously. At the firm level, it means that two individuals with similar abilities, skills and education but with two different sets of social identities are likely to face unequal business, job, and salary opportunities. Ruwanpura (2008) for example demonstrates how cultural and gender identities influence managerial decisions: in 2006, a female secondary teacher in the UK was dismissed for wearing a veil, while in the same year, a female employee at the British Airways check-in desk was put on probation for wearing a cross on her necklace. Despite sharing a female identity, the social and corporate perception of both gender and religious identities interacted in such a way to produce different decisional outcomes based on a dominant ethical standard of what is deemed acceptable.

Starting with both concepts of stratification and intersectionality, it seems reasonable to argue that individuals tend to perceive, unconsciously or consciously, their social interactions to be with groups rather individuals. Individuals tend to make decisions according to the salient group, dominant in a particular context, out of the multiple identity groups to which they belong. Whether group decisions are rational according to a standard of payoff maximization, as in the banking industry (Cohn and Fehr and Maréchal, 2014), or according to the prescribed ethical standards in the society, the economy or the environment, the way individual identities are stratified and intersect with one another determines the salient ethical standard ruling the market and social interactions. Therefore, given the importance of group decision in social interactions, we define elitist earnings at a group level rather individual level. As such, we wonder whether some identity groups are more inclined to receive elitist earnings than others and if so, whether such earning behaviour spreads to the entire labour force rather than to the top 1% of the income distribution.

#### 3. Elitist Earnings Across Occupations

In the context of labour market interactions, ideals of market identities set the criteria of optimality in the allocation of jobs and wages in the labour market. The identity of the profit-maximizing producer or utility-maximizing consumer are essential to understand market behaviours, but accepting that market agents have multiple identities lead to a more complex view of market agents. If market agents have multiple identities, it follows that the optimality point in the programs of profit-maximization and utility-maximization can be

influenced by these multiple identities. In the context of labour market interactions for example, the dominant social identity of the profit-maximizing producer may influence labour demand decisions. Hiring and firing decisions are likely to be influenced by the identity to which the decision-maker belongs, essentially to minimize the uncertainty of dealing with unknown behavioural norms associated with other groups' identity. The "dominant" standard of an identity group in the labour market will determine whether the outcome is fair or not according to that standard. Hence, the persistence of occupational segregation over time by race, ethnicity and gender is well-documented (Charles, 1992; Chang, 2000; Tomaskovic-Devey *et al.*, 2006) in terms of occupational norm sustainability. As norms emerge, an ideal sets the criteria of optimal behaviour which is identity-specific and serve as a basis for social interactions. Belonging to a group sharing a common ideal engender a sense of identity for its group members. Goette *et al.* (2006) show how group membership creates social ties which lead group members to enforce a norm of cooperation between them.

Economic justice is based on the premises that everyone should receive the income they deserve whereby each unit of labour and capital receive their rewards from the production process (Lyman, 1920). The time dimension of the production process brings to this marginalist view the problem of power relationships in the distribution of production revenues. Adding the identity element to the production process means that the units of labour can be understood from the perspective of groups based on race, ethnicity, gender, age, occupation, and so on. Each group behaves rationally according to the group's interest and a dominant group influences the distribution of the rewards of labour productivity according to the group interest. In the labour market, groups of interest may be composed of employers, employees, or stakeholders, whose norms of fairness may differ from one another depending on the perspective adopted. The fair wage-effort approach to efficiency wages takes the relational perspective of both employers and employees (Akerlof and Yellen, 1990). This hypothesis argues that wages are set above market clearing levels essentially because employers have a perception of how much they should pay for a given work or effort, as much as employees have a perception of how much they should be paid for a given work or effort. In other words, the market identity of agents influences their perception of fairness and labour market outcomes as a result, including job opportunities and relative wages. Based on the fair-wage hypothesis, Author A shows how the cultural perception of the Mexican gender identity translates into an increasing gender wage gap between male and female maquiladora workers over time. For employers and employees, both supply of labour and demand for labour depend on the price of labour. However, given that the monitoring of individual performance and effort is difficult, determining the price of labour for a type of worker must rely on a perceived social value of one of the identities of worker. Assuming that effort is not measurable and varies across individuals, the assessment of the value of a particular identity relies to some extent on the social perception of this identity outside the workplace. For example, as demonstrated by Brown and Yang (2015) in the jockey profession and Author B in the case of social entrepreneurs, social norms place a relative value on gender groups.

Let us assume a society with two demographic group identities *i* and *j*, both belonging to the same occupational group *k*. Therefore, individuals are composed of group identities *i* and *k*, or composed of group identities *j* and *k*. The elitist identity is represented by j and received a group premium for group membership while the nonelitist identity is represented by i whose earnings are discriminated against due to group membership. At the level of the economy, let us assume national output: Y = f(K, L) = rK + wL with *K* for capital and *r* for its marginal product or rate of profit, and with *L* for labour and *w* for its marginal product or wage. At the societal level, the sum of earnings from capital and labour  $z = \sum (r + w)$  is then distributed between all identity groups such that Z = z(i, j, k). Over time, assuming  $Z_t$  follows a trend-stationary process such that  $Z_t = \alpha + \beta t + \varepsilon_t$  where  $\alpha$  is a constant, *t* is a deterministic trend, and  $\varepsilon_t$  is a white noise term, then the nature of the long-run process gives us a classification of elitist versus non-elitist earnings. Starting from a general model of the Dickey-Fuller (DF) unit root test,

$$Z_t = \alpha + \phi Z_{t-1} + \beta t + \varepsilon_t$$

or

$$\Delta Z_t = \alpha + \varphi Z_{t-1} + \beta t + \varepsilon_t$$

where  $\varphi = \phi - 1$  and  $\Delta Z_t = Z_t - Z_{t-1}$ . Earnings are non-elitist if:

 $\Delta z(k)_t = \varphi z(k)_{t-1} + \alpha + \beta t + \varepsilon_t \text{ (if } \varphi < 0 \text{ trend-stationary process),}$ 

or;  $\Delta z(i)_t = \varphi z(i)_{t-1} + \alpha + \varepsilon_t$  (if  $\varphi < 0$  stationary process around a non-zero value),

or  $\Delta z(i)_t = \varphi z(i)_{t-1} + \varepsilon_t$  (if  $\varphi < 0$  stationary process around a zero value),

and earnings are elitist if:

 $\Delta z(j)_t = \varepsilon_t$  (if  $\varphi = 0$  non-stationary process ) with  $\varepsilon_t$  following the random walk of the evolving inequalities. An overview of the null (non-stationarity) and the alternative (stationarity) hypothesis of the Dickey-Fuller (DF) unit root test is provide in Table 1, where  $\mu$  indicates an overall mean of the process, and  $\delta$  is a constant growth (drift) in the model of first difference of a non-stationary series (Hill *et al.*, 2011).

Table 1. Autoregressive (AR) Processes and the Dickey-Fuller (DF) Test

	AR processes: $ \phi_1  < 1$	Setting: $\phi_1=1$	DF Test
(1)	$Z_t = \phi Z_{t-1} + \varepsilon_t$	$Z_t = Z_{t-1} + \varepsilon_t$	No constant, no trend
(2)	$Z_t = \alpha + \phi Z_{t-1} + \varepsilon_t$	$Z_t = Z_{t-1} + \varepsilon_t$	Constant, no trend
	$\alpha = \mu(1 - \phi)$	lpha=0	
(3)	$Z_t = \alpha + \phi Z_{t-1} + \beta t + \varepsilon_t$	$Z_t = \delta + Z_{t-1} + \varepsilon_t$	Constant and trend
	$\alpha = \mu(1 - \phi) + \phi\delta$	$lpha = \delta$	
	$\beta = \delta(1 - \phi)$	$\beta = 0$	
	$\beta = \delta(1 - \phi)$	$\beta = 0$	

If the earnings variable of an identity group is non-stationary, it means that there is a persistent cumulation of past effects (shocks) (Hendry and Juselius, 2001) leading to sustained changes in earnings. If the earnings variable of an identity group is stationary, it means that their earnings remain constant over the period. Stationary earnings are not benefiting from the increase in occupational earnings over the period and they are assumed to be compensating for a movement of income towards non-stationary earnings. Hence, non-stationary (stochastic trend) earnings are "elitist" in comparison to trend-stationary (deterministic-trend) or stationary earnings in the sense that a percentile of income distribution experiences shocks that cumulate in the long-run while other percentiles do not. In effect, trend-stationary "non-elitist" earnings represent a percentile of income distribution whose long-run trend grow at an arithmetic rate, while stationary "non-elitist" earnings represent a percentile of income distribution whose long-run trend is constant.

#### 4. Methodology: Identifying Elitist Earnings Across Occupations

Despite the recognition of the importance of group behaviour in determining income inequality, the empirical methodology used in the literature is still mainly based on the individual, with individual income used as dependent variable against control variables such as education, experience, gender, race and so on (Tienda and Lii, 1987). Departing from methodological individualism requires taking groups at the primary unit of analysis. In the context of the US labour market, racial and gender discrimination remain a prominent feature regardless of age, experience, or education (Bertrand and Mullainathan, 2004; Schnelder, 2013). Therefore, the main hypothesis tested is whether similar gender and racial identities at the occupational level earn elitist earnings, as defined above, compared to other gender and racial identities. Using Augmented Dickey-Fuller (ADF) tests, the methodology consists of testing whether the earnings of each identity group in each occupation are non-stationary, trend-stationary or stationary over the analysed period. By doing so, we are able to categorise the pattern followed by the earnings of each group across occupations as elitist or not. We use nominal instead of real earnings to account for money illusion including price stickiness, and lack of inflation-indexation on labour contracts and laws. We use means rather than median earnings in order to account for the information provided by outliers. In other words, we are interested in exploring the raw information provided by groups' earnings along the income stratification spectrum.

#### 4.1 US Occupations (1968-2011)

Using the Current Population Survey (CPS) data (King *et al.*, 2010), this first case study looks at the long-run behaviour of earnings by gender and racial groups across occupations in the US labour force between 1968 and 2011. In accordance with the literature on the US stratification using CPS data (Arestis and Charles and Fontana, 2014), the gender and racial identity group included are white men (wm), black men (bm), Hispanic men (hm), white women (wf), black women (bf), and Hispanic women (hf). We use the current annual weekly earnings of

the above mentioned identity groups for 27 consistent occupational groups over the period 1968-2011, as displayed in Tables 2 to 7, respectively. Earnings are the annual average of usual weekly earnings of employed full-time wage and salary workers by group.

Apart from health and personal services with 89 and 78 percent female labour force, Table 2 shows that white men experience non-stationary earnings across all occupations. In comparison, Tables 3 and 4 show that black and Hispanic men experience trend-stationary and/or stationary earnings in many occupations, in professional occupations in particular. Black men experience stationary and trend-stationary earnings in a wider variety of occupations than Hispanic men. For example, in managerial occupations, the earnings of Hispanic men are non-stationary while the earnings of black men are stationary. Looking at the female part of the labour force, Tables 5 to 7 show a similar racial and ethnic dichotomy whereby white women experience non-stationary earnings across most occupations, while black and Hispanic women experience non-stationary earnings in only a few occupations. Here, trend-stationary and stationary earnings for the black and Hispanic groups go beyond professional occupations and affect most part of the labour force. Overall, answering the question whether earnings are elitist at the group level in the US labour force is dominated by the fact that earnings of white workers display cumulative past effects (shocks) across most occupations and gender groups.

#### 4.2 UK Occupations (2001-2014)

Using the Labour Force Survey (LFS) data, this second case study looks at the long-run behaviour of earnings by gender and racial groups across occupations in the UK labour force in the period between 2001 and 2014. The gender and racial identity group included are white women (*wf*), non-white women (*nwf*), white men (*wm*), and non-white men (*nwm*). We use the weekly gross (net) pay in the main job and the data is aggregated from the individual level as means per quarter. The nine occupational groups using SOC 2000 codes "occupation" are consistent over the period 2001Q2-2014Q4. The results for each identity group *wf*, *nwf*, *wm*, and *nwm* are displayed in Tables 8 to 11, respectively.

Starting with the comparison between white and non-white women in Tables 8 and 9, the white female group experiences non-stationary earnings in four out of the nine types of occupations. In comparison, the non-white female group experiences trend-stationary earnings in all occupations. Similarly for the male groups, the white male group experiences non-stationary earnings in four out of the nine types of occupations. In comparison, the non-white male group experiences trend-stationary earnings in four out of the nine types of occupations. In comparison, the non-white male group experiences trend-stationary earnings in all occupations. Overall, answering the question whether earnings are elitist at the group level in the UK labour force is dominated by the fact that earnings of the white labour force display cumulative past effects (shocks) across many occupations and gender groups.

#### 5. Conclusions

The literature in social sciences on identity, stratification, and intersectionality has long shown the importance of group identity in explaining the persistence of income inequality over time. However, methodological individualism and marginalism in economics mean that income inequality is still assessed from the perspective of the individual with individual income as dependent variable, individual characteristics as control variables, and a time trend to assess the path-dependency of inequality. By taking a group perspective to individuals, the contribution of this paper is to define and test for elitist earnings across the labour force. The magnitude of earning excesses in the financial sector has been argued to be one of the causes of the 2007 crisis. At the intersection of occupational, gender and racial norms, the two case studies show that elitist earnings is a group phenomenon, not specific to financial and managerial occupations, but it extends to most of the US and UK labour forces.

The US and the UK are known to be among the most unequal high income countries, where income and wealth inequalities "reinforce" themselves through high health and education inequalities (Dorling, 2013). The 1%, 9% and 90% of the income distribution can be thought of as three economic interests groups where, in the long run, as one group benefits the other two tend not to. It has also been established that the rising education outcome and skill gaps cannot anymore be explained by the skill biased technological change, which seems to suggest that the marginal productivity is an obsolete concept in economics. We contribute to this discussion by suggesting that in the most unequal high income countries there is in effect a pattern of elitist earnings across occupations for a dominant group, mainly white male or female, at the expense of other racial, ethnic, and gender groups. Thus, despite the fact that the elite group is characterised by the magnitude of earning accumulation, the cumulative effects on group earnings is a pattern visible across the strata of the society.

#### References

Akerlof, G. A. and Yellen, J. L. (1990) 'The Fair-Wage-Effort Hypothesis and Unemployment', *The Quarterly Journal of Economics*, **105**, 255-283.

Ashforth, B. E. and Mael, F. (1989) 'Social Identity Theory and the Organization', *Academy of Management Review*, **14**, 20-39.

Ashley, L. and Empson, L. (2016) 'Understanding social exclusion in elite professional service firms: field level dynamics and the 'professional project''', *Work, Employment and Society*, 1-19.

Atkinson, A. B., Piketty, T. and Emmanuel, S. (2011) 'Top Incomes in the Long Run of History', *Journal of Economic Literature*, **49**, 3-71.

Bertrand, M., Chugh, D. and Mullainathan, S. (2005) 'Implicit Discrimination', *The American Economic Review*, **95**, 94-98.

Bertrand, M. and Mullainathan, S. (2004) 'Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination', *The American Economic Review*, **94**, 991-1013.

Bornstein, G., Kugler, T. and Ziegelmeyer, A. (2004) 'Individual and Group Decisions in the Centipede Game: Are Groups More "Rational" Players?', *Journal of Experimental Social Psychology*, **40**, 599-605.

Boulu-Reshef, B. (2015) 'Toward a Personal Identity Argument to Combine Potentially Conflicting Social Identities', *Review of Social Economy*, **73**, 1-18.

Bourdieu, P. (1984) *Distinction: A Social Critique of the Judgement of Taste*, Cambridge, MA, Harvard University Press.

Brown, A. and Yang, F. (2015) 'Does Society Underestimate Women? Evidence from the Performance of Female Jockeys in Horse Racing', *Journal of Economic Behavior and Organization*, **111**, 106-118.

Casey, T. and Dustmann, C. (2010) 'Immigrants' Identity, Economics Outcomes and the Transmission of Identity across Generations', *The Economic Journal*, **120**, F31- F51.

Chang, M. L. (2000) 'The Evolution of Sex Segregation Regimes', American Journal of Sociology, **105**, 1658-1701.

Charles, M. (1992) 'Cross-National Variation in Occupational Sex Segregation', *American Sociological Review*, **57**, 483-502.

Charness, G. and Sutter, M. (2012) 'Groups Make Better Self-Interested Decisions', *Journal of Economic Perspectives*, **26**, 157-176.

Clegg, S. R., Courpasson, D. and Philips, N. (2006) *Power and Organizations*, Thousand Oaks, CA, SAGE.

Cohn, A., Fehr, E. and Maréchal, M. A. (2014) 'Business Culture and Dishonesty in the Banking Industry', *Nature*, **Letters**, 86-89.

Crenshaw, K. W. (1989) 'Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics', *University of Chicago Legal Forum*, **129**, 139-67.

Darity, W. A., Jr. and Williams, R. (1985) 'Peddlers Forever? Culture, Competition, and Discrimination', *American Economic Review*, **75**, 256-261.

Davis, J. B. (2015) 'Stratification Economics and Identity Economics', *Cambridge Journal of Economics*, **39**, 1215-1229.

Denk, O. (2015) Who Are the Top 1% Earners in Europe?, Paris, OECD.

Goette, L., Huffman, D. and Meier, S. (2006) 'The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups', *The American Economic Review*, **96**, 212-216.

Grusky, D. B. and Weisshaar, K. (2014) *Social Stratification: Class, Race, and Gender in Sociological Perspective,* Fourth Edition, Westview Press Inc.

Hendry, D. F. and Juselius, K. (2001) 'Explaining Cointegration Analysis: Part Ii', *The Energy Journal*, **0**, 75-120.

hooks, b. (1981) Ain't I a Woman?: Black Women and Feminism, Boston, South End Press.

Khan, S. (2012) 'The Sociology of Elites', Annual Review of Sociology, **38**, 361-377.

King, M., Ruggles, S., Alexander, J. T., Flood, S., Genadek, K., Schroeder, M. B., Trampe, B. and Vick, R. (2010) *Integrated Public Use Microdata Series, Current Population Survey: Version 3.0*, Minneapolis, MN: Minnesota Population Center [producer and distributor].

Lamont, M., Beljean, S. and Clair, M. (2014) 'What Is Missing? Cultural Processes and Causal Pathways to Inequality', *Socio-Economic Review*, 1-36.

Lyman, E. W. (1920) 'The Ethics of the Wages and Profit System', *International Journal of Ethics*, **31**, 93-108.

Mason, P. L. (1996) 'Race, Culture, and the Market', Journal of Black Studies, 26, 782-808.

Massey, D. S. (2007) Categorically Unequal: The American Stratification System, New York, Russell Sage Foundation.

Massey, D. S., McCall, L., Tomaskovic-Devey, D., Avent-Holt, D., Monin, P., Forgues, B. and Wang, T. (2014) 'Understanding Inequality through the Lens of Cultural Processes: On Lamont, Beljean and Clair 'What Is Missing? Cultural Processes and Causal Pathways to Inequality'', *Socio-Economic Review*, **12**, 609-636.

McCall, L. (2005) 'The Complexity of Intersectionality', Signs, 30, 1771-1800.

Muehlheusser, G., Roider, A. and Wallmeier, N. (2015) 'Gender Differences in Honesty: Groups Versus Individuals', *Economics Letters*, **128**, 25-29.

Philippon, T. and Reshef, A. (2012) 'Wages and Human Capital in the U.S. Finance Industry: 1909-2006', *Quarterly Journal of Economics*, **127**, 1551-1609.

Piketty, T. (2014) *Capital in the Twenty-First Century*, Harvard University Press.

Piketty, T. and Saez, E. (2003) 'Income Inequality in the United States 1913-1998', *Quarterly Journal of Economics*, **148**, 1-39.

Prasad, A. and Qureshi, T. (2016) 'Race and racism in an elite postcolonial context: reflections from investment banking', *Work, Employment and Society*, 1-11.

Ruwanpura, K. N. (2008) 'Multiple Identities, Multiple Discrimination: A Critical Review', *Feminist Economics*, **14**, 77-105.

Schnelder, M. P. A. (2013) 'Illustrating the Implications of How Inequality Is Measured: Decomposing Earnings Inequality by Race and Gender', *Journal of Labor Research*, **34**, 476-514.

Stryker, S. (1968) 'Identity Salience and Role Performance', *Journal of Marriage and the Family*, **4**, 558-564.

Stryker, S. and Burke, P. J. (2000) 'The Past, Present, and Future of Identity Theory', *Social Psychology Quarterly*, **63**, 284-297.

Tajfel, H. and Turner, J. (1986) 'The Social Identity Theory of Intergroup Behavior'. In Worchel, S. and Austin, W. (eds) *Psychology of Intergroup Behavior*, Chicago, Nelson-Hall, pp. 7-24.

Tienda, M. and Lii, D.-T. (1987) 'Minority Concentration and Earnings Inequality: Blacks, Hispanics, and Asian Compared', *American Journal of Sociology*, **93**, 141-165.

Tomaskovic-Devey, D. and Skaggs, S. (1999) 'An Establishment-Level Test of the Statistical Discrimination Hypothesis', *Work and Occupations*, **26**, 422-445.

Tomaskovic-Devey, D., Stainback, K., Taylor, T., Zimmer, C., Robinson, C. and McTague, T. (2006) 'Documenting Desegragation: Segregation in American Workplaces by Race, Ethnicity, and Sex, 1966-2003', *American Sociological Review*, **71**, 565-588.

#### Notes to all Earnings' Tables for US occupations (Tables 2 to 7)

Source: Authors' calculations from the US Current Population Survey (CPS), received through IPUMS.

**Note:** Table provides an ADF test-statistic, with the lag length in parentheses.  $\tau_t$  refers to the ADF test-statistic from a model with a constant and trend.  $\tau_{\mu}$  refers to the ADF test-statistic from a model with a constant only. Lag selection is based on Schwarz's Bayesian information criterion (SBIC). Relevant critical values of the ADF unit root test at 5% significance level are as follows (Fuller, 1976, p. 371):  $\tau^{cr}(0.05) = -1.95$ ,  $\tau_{\mu}^{cr}(0.05) = -2.93$ ,  $\tau_{\mu}^{cr}(0.05) = -3.50$ . All unit root test results are estimated by Stata. Labels refer to the annual average of usual weekly earnings of employed full-time wage and salary workers for: wm = white men, wf = white women, bm = black men, bf = black women, hm = Hispanic men, hf = Hispanic women. Occupations follow the OCC1990 classification (https://cps.ipums.org/cps-action/variables/OCC1990#description\_section) which is consistent over time.

#### Notes to all Earnings' Tables for UK occupations (Tables 8-11)

**Source:** Authors' calculations from the UK Labour Force Survey (LFS), received through the Data Archive, University of Essex. **Note:** Table provides an ADF test-statistic, with the lag length in parentheses.  $\tau_i$  refers to the ADF test-statistic from a model with a constant and trend.  $\tau_{\mu}$ refers to the ADF test-statistic from a model with a constant only. Lag selection is based on the Schwartz information criteria (SIC). Relevant critical values of the ADF unit root test at 5% significance level are as follows (Fuller, 1976, p. 371):  $\tau^{er}(0.05) = -1.95$ ,  $\tau_{\mu}^{er}(0.05) = -2.93$ ,  $\tau_{i}^{er}(0.05) = -3.50$ . Relevant critical values of the *F*-test at 5% significance level are as follows (Dickey and Fuller, 1981, p. 1063): (a) *F*-test for  $H_0$ :  $\alpha = 0$ ,  $\rho = 1$  in  $y_i = \alpha + \rho y_{i-1} + u_i$ (AR(1) with a drift),  $F^{er}(0.05) = 4.86$  and *F*-test for  $H_0$ :  $\alpha = 0$ ,  $\rho = 1$  in  $y_i = \alpha + \delta t + \rho y_{i-1} + u_i$  (AR(1) with a drift and a linear time trend),  $F^{er}(0.05) = 6.73$ ; and (b) *F*-test for  $H_0$ :  $\alpha = 0$ ,  $\beta = 0$ ,  $\rho = 1$  in  $y_i = \alpha + \delta t + \rho y_{i-1} + u_i$  (AR(1) with a drift and a linear time trend),  $F^{er}(0.05) = 5.13$ . All unit root test results are estimated by Stata. Labels refer to: wm = white men, wf = white women, nwm = non-white men, nwf = non-white women, grss = gross weekly earnings, net = net weekly earnings.

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations	wm: $ au_t$ =-1.276 (1)			41.3
2. Management related occupations	wm: $ au_t$ =-1.879 (1)			55.5
Professional occupations				
3. Engineers and Scientists	wm: $ au_t$ =-1.724 (1)			23.7
4. Health diagnosing occ.	wm: $ au_t$ =-0.797 (1)			77
5. Teachers	wm: $ au_t$ =-2.145 (2)			74.5
6. Social Scientists and Urban Planners	wm: $ au_t$ =-2.576 (1)			53.2
7. Social, Recreations, and Religious Workers	wm: $ au_t$ =-2.598 (1)			63.8
8. Lawyers and Judges	wm: $ au_t$ =-1.858 (4)			36.2
9. Writers, Artists, Entertainers, and Athletes	wm: $ au_t$ =-2.379 (1)			47
10. Technicians	wm: $ au_t$ =-1.728 (1)			51.2
11. Sales occupations	wm: $\tau_t$ =-1.290 (1)			51.3
12. Administrative support occ.	wm: $\tau_t$ =-2.285 (1)			73.8
Service occupations				
13. Household services	wm: $ au_t$ =-2.566 (2)			90
14. Protective services	wm: $ au_t$ =-1.621 (1)			21.2
15. Food services	wm: $ au_t$ =-3.091 (1)			56.4
16. Health services		wm: $ au_t$ =-5.396 (0)	wm $ au_{\mu}$ =-4.826 (0)	88.8
17. Cleaning and Building	wm: $ au_t$ =-2.171 (1)			32.4
18. Personal services		wm: $ au_t$ =-3.490 (1)	wm $ au_{\mu}$ =-2.950 (0)	78.5
19.Farming, forestry, fishing	wm: $\tau_t$ =-1.960 (1)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics	wm: $ au_t$ =-2.570 (1)			3.8
21. Construction trades	wm: $ au_t$ =-1.743 (2)			2.2
22. Extractive occupations	wm: $ au_t$ =-2.418 (2)			0.5
23. Precision occupations	wm: $ au_t$ =-2.185 (1)			32.7
Operators, fabricators, and labourers				
24. Operators	wm: $ au_t$ =-2.643 (2)			33
25. Transportation occupations	wm: $ au_t$ =-1.958 (1)			11.8
26. Material moving occupations	wm: <i>τ</i> <sub>t</sub> =-1.740 (1)			15.2
27. Military occupations	wm: τ <sub>t</sub> =-1.601 (1)			9.7

#### Table 2. US White men (WM): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1968-2011 (43 obs.)

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations		bm: $ au_t$ =-4.135 (1)		41.3
2. Management related occupations	bm: τ <sub>t</sub> =-2.886 (3)			55.5
Professional occupations				
3. Engineers and Scientists		bm: $ au_t$ =-3.609 (1)	bm: $ au_{\mu}$ =-2.910 (1)	23.7
4. Health diagnosing occ.		bm: $ au_t$ =-4.054 (1)	bm: $ au_{\mu}$ =-2.600* (1)	77
5. Teachers		bm: $\tau_t$ =-3.227* (1)	bm: $ au_{\mu}$ =-3.115 (1)	74.5
6. Social Scientists and Urban Planners		bm: $ au_t$ =-4.107 (1)	bm: $\tau_{\mu}$ =-3.302 (1)	53.2
7. Social, Recreations, and Religious Workers	bm: $ au_t$ =-2.307 (3)			63.8
8. Lawyers and Judges		bm: $ au_t$ =-5.081 (1)	bm: $ au_{\mu}$ =-3.090 (1)	36.2
9. Writers, Artists, Entertainers, and Athletes		bm: $ au_t$ =-4.802 (1)	bm: $\tau_{\mu}$ =-3.991 (1)	47
10. Technicians	bm: $ au_t$ =-2.383 (2)			51.2
11. Sales occupations			bm: $ au_{\mu}$ =-2.880 (1)	51.3
12. Administrative support occ.		bm: $ au_t$ =-3.494 (1)		73.8
Service occupations				
13. Household services		bm: $ au_t$ =-7.449 (0)	bm: $ au_{\mu}$ =-7.215 (0)	90
14. Protective services	bm: $ au_t$ =-2.445 (1)			21.2
15. Food services	bm: $ au_t$ =-2.207 (3)			56.4
16. Health services		bm: $ au_t$ =-5.271 (0)	bm: $ au_{\mu}$ =-5.221 (0)	88.8
17. Cleaning and Building	bm: $ au_t$ =-2.746 (1)			32.4
18. Personal services	bm: $ au_t$ =-3.122 (1)			78.5
19.Farming, forestry, fishing	bm: $ au_t$ =-2.142 (3)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics	bm: $ au_t$ =-2.159 (2)			3.8
21. Construction trades	bm: $ au_t$ =-2.537 (1)			2.2
22. Extractive occupations	bm: $ au_t$ =-0.965 (3)			0.5
23. Precision occupations	bm: $ au_t$ =-2.547 (1)			32.7
Operators, fabricators, and labourers				
24. Operators	bm: $ au_t$ =-1.554 (1)			33
25. Transportation occupations	bm: $ au_t$ =-2.920 (1)			11.8
26. Material moving occupations	bm: τ <sub>t</sub> =-2.264 (1)			15.2
27. Military occupations	bm: $ au_t$ =-1.836 (2)			9.7

#### Table 3. US Black men (BM): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1968-2011 (43 obs.)

Note: \*indicates statistical significance at the 10% level, significance at the 5% level otherwise.

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations	hm: $ au_t$ =-2.389 (1)			41.3
2. Management related occupations	hm: $ au_t$ =-1.102 (2)			55.5
Professional occupations				
3. Engineers and Scientists		hm: $ au_t$ =-4.570 (0)	hm: $ au_{\mu}$ =-4.493 (0)	23.7
4. Health diagnosing occ.		hm: $ au_t$ =-3.414 (1)		77
5. Teachers		hm: $ au_t$ =-6.897 (0)	hm: $ au_{\mu}$ =-7.029 (0)	74.5
6. Social Scientists and Urban Planners		hm: $ au_t$ =-7.033 (0)	hm: $\tau_{\mu}$ =-6.984 (0)	53.2
7. Social, Recreations, and Religious Workers		hm: $ au_t$ =-5.496 (0)	hm: $\tau_{\mu}$ =-4.563 (0)	63.8
8. Lawyers and Judges		hm: $ au_t$ =-1.616 (1)	·	36.2
9. Writers, Artists, Entertainers, and Athletes		hm: τ <sub>t</sub> =-6.252 (0)	hm: $ au_{\mu}$ =-6.293 (0)	47
10. Technicians	hm: $\tau_t$ =-2.770 (1)		•	51.2
11. Sales occupations	hm: $ au_t$ =-2.374 (1)			51.3
12. Administrative support occ.	hm: $ au_t$ =-2.624 (1)			73.8
Service occupations				
13. Household services	hm: $ au_t$ =-2.941 (1)			90
14. Protective services	hm: $ au_t$ =-3.064 (1)			21.2
15. Food services	hm: $ au_t$ =-2.371 (1)			56.4
16. Health services		hm: $ au_t$ =-5.992 (0)	hm: $ au_{\mu}$ =-6.069 (0)	88.8
17. Cleaning and Building	hm: $ au_t$ =-2.026 (1)			32.4
18. Personal services		hm: $ au_t$ =-4.577 (0)	hm: $ au_{\mu}$ =-4.501 (0)	78.5
19.Farming, forestry, fishing	hm: $ au_t$ =-0.871 (3)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics	hm: $ au_t$ =-1.950 (1)			3.8
21. Construction trades	hm: $ au_t$ =-0.080 (2)			2.2
22. Extractive occupations		hm: $ au_t$ =-3.385* (1)	hm: $ au_{\mu}$ =-2.744* (1)	0.5
23. Precision occupations	hm: $ au_t$ =-2.370 (1)			32.7
Operators, fabricators, and labourers				
24. Operators	hm: $ au_t$ =-0.710 (3)			33
25. Transportation occupations	hm: $ au_t$ =-1.601 (2)			11.8
26. Material moving occupations	hm: $ au_t$ =-1.030 (2)			15.2
27. Military occupations	hm: $ au_t$ =-0.476 (4)			9.7

#### Table 4. US Hispanic men (HM): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1971-2011 (40 obs.)

Note: \*indicates statistical significance at the 10% level, significance at the 5% level otherwise.

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations	wf: $\tau_t$ =-1.672 (1)			41.3
2. Management related occupations	wf: $\tau_t$ =-0.656 (3)			55.5
Professional occupations				
3. Engineers and Scientists	wf: $\tau_t$ =-3.181 (1)			23.7
4. Health diagnosing occ.	wf: $\tau_t$ =-1.237 (2)			77
5. Teachers	wf: $\tau_t$ =-0.221 (2)			74.5
6. Social Scientists and Urban Planners	wf: $\tau_t$ =-2.603 (1)			53.2
7. Social, Recreations, and Religious Workers	wf: $\tau_t$ =-0.462 (1)			63.8
8. Lawyers and Judges	wf: $\tau_t$ =-2.182 (2)			36.2
9. Writers, Artists, Entertainers, and Athletes	wf: $\tau_t$ =-2.957 (1)			47
10. Technicians	wf: $ au_t$ =-1.567 (1)			51.2
11. Sales occupations	wf: $\tau_t$ =-2.697 (1)			51.3
12. Administrative support occ.	wf: $\tau_t$ =-1.663 (1)			73.8
Service occupations				
13. Household services	wf: $\tau_t$ =-0.102 (2)			90
14. Protective services		wf: $\tau_t$ =-3.704 (1)		21.2
15. Food services	wf: $\tau_t$ =-0.373 (3)			56.4
16. Health services	wf: $\tau_t$ =-2.603 (1)			88.8
17. Cleaning and Building	wf: $\tau_t$ =-2.282 (1)			32.4
18. Personal services	wf: $\tau_t$ =-2.530 (1)			78.5
19.Farming, forestry, fishing	wf: $\tau_t$ =-1.699 (2)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics	wf: $\tau_t$ =-1.738 (1)			3.8
21. Construction trades	wf: $\tau_t$ =-3.022 (3)			2.2
22. Extractive occupations		wf: $\tau_t$ =-4.714 (0)	wf: $ au_{\mu}$ =-4.109 (0)	0.5
23. Precision occupations		wf: $\tau_t$ =-2.278 (1)		32.7
Operators, fabricators, and labourers				
24. Operators	wf: $\tau_t$ =-2.084 (3)			33
25. Transportation occupations		wf: $\tau_t$ =-3.287* (3)		11.8
26. Material moving occupations	wf: τ <sub>t</sub> =0.703 (3)			15.2
27. Military occupations	wf: <i>τ</i> <sub>t</sub> =-2.273 (1)			9.7

#### Table 5. US White women (WF): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1968-2011 (43 obs.)

Note: \*indicates statistical significance at the 10% level, significance at the 5% level otherwise.

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations	bf: $\tau_t$ =-0.981 (4)			41.3
2. Management related occupations	bf: $\tau_t$ =-2.047 (2)			55.5
Professional occupations				
3. Engineers and Scientists		bf: $\tau_t$ =-2.334 (1)		23.7
4. Health diagnosing occ.	bf: $\tau_t$ =-1.749 (1)			77
5. Teachers	bf: $\tau_t$ =-2.878 (1)			74.5
6. Social Scientists and Urban Planners		bf: $ au_t$ =-3.595 (1)	bf: $ au_{\mu}$ =-2.632* (1)	53.2
7. Social, Recreations, and Religious Workers		bf: $\tau_t$ =-4.394 (1)	bf: $ au_{\mu}$ =-3.543 (1)	63.8
8. Lawyers and Judges		bf: $\tau_t$ =-4.363 (1)		36.2
9. Writers, Artists, Entertainers, and Athletes		bf: $\tau_t$ =-4.036 (1)	bf: $ au_{\mu}$ =-3.750 (1)	47
10. Technicians	bf: $\tau_t$ =-2.972 (2)			51.2
11. Sales occupations	bf: $\tau_t$ =-0.164 (3)			51.3
12. Administrative support occ.	bf: $\tau_t$ =-1.625 (2)	bf: $\tau_t$ =-3.320* (2)		73.8
Service occupations				
13. Household services	bf: $\tau_t$ =-2.189 (3)			90
14. Protective services		bf: $\tau_t$ =-6.674 (1)		21.2
15. Food services	bf: $\tau_t$ =-2.189 (2)			56.4
16. Health services	bf: $\tau_t$ =-2.226 (2)			88.8
17. Cleaning and Building		bf: $ au_t$ =-5.687 (0)	bf: $ au_{\mu}$ =-5.455 (0)	32.4
18. Personal services	bf: $\tau_t$ =-2.314 (2)			78.5
19.Farming, forestry, fishing	bf: $\tau_t$ =-1.792 (3)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics		bf: τ <sub>t</sub> =-3.212* (0)	bf: $ au_{\mu}$ =-3.305 (1)	3.8
21. Construction trades		bf: τ <sub>t</sub> =-7.352 (0)	bf: $ au_{\mu}$ =-5.385 (0)	2.2
22. Extractive occupations				0.5
23. Precision occupations		bf: $\tau_t$ =-3.651 (3)		32.7
Operators, fabricators, and labourers				
24. Operators		bf: $\tau_t$ =-3.575 (2)		33
25. Transportation occupations		bf: $\tau_t$ =-4.276 (1)		11.8
26. Material moving occupations			bf: $ au_{\mu}$ =-5.511 (0)	15.2
27. Military occupations		bf: $\tau_{t}$ =-3.769 (1)	bf: $\tau_{\mu}$ =-2.766* (1)	9.7

#### Table 6. US Black women (BF): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1968-2011 (43 obs.)

Note: \*indicates statistical significance at the 10% level, significance at the 5% level otherwise. (--) indicates not enough observations to run ADF tests.

	Non-stationary	Trend-stationary	Stationary	Female labour
	earnings	earnings	earnings	share in 2011(%)
Exec., Adm. and Man. occupations				
1. Managerial occupations	hf: $\tau_t$ =-1.845 (4)			41.3
2. Management related occupations		hf: $ au_t$ =-4.992 (2)		55.5
Professional occupations				
3. Engineers and Scientists		hf: $\tau_t$ =-3.382* (3)	hf: $ au_{\mu}$ =-2.829* (3)	23.7
4. Health diagnosing occ.		hf: τ <sub>t</sub> =-4.782 (1)		77
5. Teachers		hf: τ <sub>t</sub> =-3.556 (1)	hf: $ au_{\mu}$ =-2.682* (1)	74.5
6. Social Scientists and Urban Planners		hf: τ <sub>t</sub> =-3.386* (1)	hf: $\tau_{\mu}$ =-2.645* (1)	53.2
7. Social, Recreations, and Religious Workers		hf: τ <sub>t</sub> =-6.694 (0)	hf: $\tau_{\mu}$ =-5.963 (0)	63.8
8. Lawyers and Judges	hf: $\tau_t$ =-2.097 (1)			36.2
9. Writers, Artists, Entertainers, and Athletes		hf: $ au_t$ =-4.599 (1)	hf: $ au_{\mu}$ =-3.669 (1)	47
10. Technicians	hf: τ <sub>t</sub> =-2.015 (2)			51.2
11. Sales occupations	hf: $\tau_t$ =-2.721 (4)			51.3
12. Administrative support occ.	hf: $\tau_t$ =-1.880 (1)			73.8
Service occupations				
13. Household services		hf: τ <sub>t</sub> =-3.186* (1)		90
14. Protective services		hf: $ au_t$ =-2.493 (1)		21.2
15. Food services		hf: $ au_t$ =-4.029 (1)		56.4
16. Health services		hf: $ au_t$ =-3.567 (1)	hf: $ au_{\mu}$ =-2.735* (1)	88.8
17. Cleaning and Building		hf: $ au_t$ =-3.970 (2)		32.4
18. Personal services	hf: τ <sub>t</sub> =-2.338 (2)			78.5
19.Farming, forestry, fishing	hf: τ <sub>t</sub> =-0.814 (3)			17.6
Precision production, craft, and repairs occ.				
20. Mechanics		hf: τ <sub>t</sub> =-5.771 (0)	hf: $ au_{\mu}$ =-5.249 (0)	3.8
21. Construction trades		hf: τ <sub>t</sub> =-6.571 (0)	hf: $ au_{\mu}$ =-6.608 (0)	2.2
22. Extractive occupations				0.5
23. Precision occupations		hf: $\tau_t$ =-4.685 (1)	hf: $ au_{\mu}$ =-3.888 (1)	32.7
Operators, fabricators, and labourers			· · · · · · · · · · · · · · · · · · ·	
24. Operators	hf: $\tau_t$ =-1.766 (2)			33
25. Transportation occupations		hf: $\tau_t$ =-4.364 (3)		11.8
26. Material moving occupations		hf: $\tau_t$ =-4.890 (0)	hf: $ au_{\mu}$ =-4.935 (0)	15.2
27. Military occupations		hf: τ <sub>t</sub> =-4.389 (0)	hf: τ <sub>μ</sub> =-3.484 (0)	9.7

#### Table 7. US Hispanic women (HF): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 1971-2011 (40 obs.)

Note: \*indicates statistical significance at the 10% level, significance at the 5% level otherwise. (--) indicates not enough observations to run ADF tests.

	Non-stationary earnings	Trend-stationary earnings	Stationary earnings	Female labour share across all years and quarters (%)
1 Managers and senior officials		wf (grss): T = -4.47 (1)		34.85
		wf (net): 🐮 = –3.84 (1)		
2 Professional occupations	wf (grss): T <sub>µ</sub> = −2.26 (3)			46.38
	wf (net): 🐮 = –2.86 (1)			
3 Associate professional and		wf (grss): T = -4.82 (1)		49.45
technical occupations		wf (net): 🐮 = –4.44 (1)		
4 Administrative and secretarial	wf (grss): ᠊┲, = −1.52 (1)			80.46
occupations	wf (net): 🐮 = –3.18 (1)			
5 Skilled trades occupations		wf (grss): 🐮 = -7.58 (2)		8.82
		wf (net): 🐮 = –7.04 (2)		
6 Personal service occupations	wf (grss): T <sub>⊯</sub> = −2.20 (4)			84.60
	wf (net): 🐮 = –1.38 (4)			
7 Sales and customer service occupations	wf (net): 🐮 = –3.45 (1)	wf (grss): $T_{r} = -3.76$ (1)		69.48
8 Process, plant and machine		wf (grss): T = -3.53 (1)		14.16
operatives		wf (net): 🐮 = –4.07 (1)		
9 Elementary occupations	wf (grss): $T_{\mu} = -1.33$ (2)	wf (net): て, = -3.93 (1)		47.62

#### Table 8. UK White females (WF): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 2001Q2-2014Q3 (54 obs.)

	Non-stationary	Trend-stationary earnings	Stationary	Female labour share across
	earnings		earnings	all years and quarters (%)
1 Managers and senior officials		nwf (grss): 🐮 = -5.90 (1)		34.85
		nwf (net): 🏗 = –4.31 (1)		
2 Professional occupations		nwf (grss): 🐮 = -4.50 (1)		46.38
		nwf (net): 🐮 = –5.16 (1)		
3 Associate professional and		nwf (grss): Т = -4.85 (1)		49.45
technical occupations		nwf (net): T = –6.25 (1)		
4 Administrative and secretarial		nwf (grss): Т = –6.08 (1)		80.46
occupations		nwf (net): 🐮 = –4.91 (1)		
5 Skilled trades occupations		nwf (grss): 🖬 = -4.12 (1)		8.82
		nwf (net): 🏗 = –4.13 (1)		
6 Personal service occupations		nwf (grss): 🖬 = -4.11 (1)		84.60
		nwf (net): 🏗 = –4.76 (1)		
7 Sales and customer service occupations	nwf (grss): ఔ <sub>r</sub> = −3.25 (1)	nwf (net): T <sub>r</sub> = –3.68 (1)		69.48
8 Process, plant and machine		nwf (grss): 🐮 = -5.60 (1)		14.16
operatives		nwf (net): 🖀 = –5.84 (1)		
9 Elementary occupations		nwf (grss): 🖬 = –4.30 (1)		47.62
		nwf (net): 🏗 = –4.84 (1)		

Table 9. UK Non-white females (NWF): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 2001Q2-2014Q3 (54 obs.)

	Non-stationary earnings	Trend-stationary earnings	Stationary earnings	Female labour share across all years and quarters (%)
1 Managers and senior officials	currings	wm (grss): 🐮 = -4.96 (1)	currings	34.85
		wm (net): 🐮 = –5.07 (1)		
2 Professional occupations		wm (grss): T <sub>e</sub> = -6.86 (1)		46.38
		wm (net): Т = –6.14 (1)		
3 Associate professional and		wm (grss): 🐮 = –3.64 (1)		49.45
technical occupations		wm (net): 🐮 = –3.13 (1)		
4 Administrative and secretarial occupations	wm (net): 🐮 = –2.58 (2)	wm (grss): 🐮 = -4.94 (1)		80.46
5 Skilled trades occupations		wm (grss): T <sub>r</sub> =4.41 (1)		8.82
		wm (net): 🖅 = –3.87 (1)		
6 Personal service occupations	wm (grss): T = -2.01 (3)			84.60
	wm (net): 🐮 = –2.93 (3)			
7 Sales and customer service		wm (grss): 🐮 = –3.94 (1)		69.48
occupations		wm (net): 🗂 = –3.53 (1)		
8 Process, plant and machine	wm (grss): 🐮 = –3.13 (1)			14.16
operatives	wm (net): 🏗 = –1.94 (3)			
9 Elementary occupations	wm (grss): 🐮 = –1.61 (3)			47.62
	wm (net): 🐮 = –0.57 (3)			

#### Table 10. UK White males (WM): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 2001Q2-2014Q3 (54 obs.)

	Non-stationary	Trend-stationary earnings	Stationary	Female labour share across
	earnings		earnings	all years and quarters (%)
1 Managers and senior officials		nwm (grss): 🖀 = –4.32 (1)		34.85
		nwm (net): 🐮 = –4.34 (1)		
2 Professional occupations		nwm (grss): 🐮 = –5.31 (1)		46.38
		nwm (net): 🐮 = –5.36 (1)		
3 Associate professional and		nwm (grss): 🏗 = –5.23 (1)		49.45
technical occupations		nwm (net): 🏗 = –5.36 (1)		
4 Administrative and secretarial	nwm (grss): ह_ = −2.54 (3)	nwm (net): 🐮 = –5.30 (1)		80.46
occupations				
5 Skilled trades occupations		nwm (grss): 🐮 = –3.49 (3)		8.82
		nwm (net): 🐮 = –5.08 (1)		
6 Personal service occupations		nwm (grss): 🏗 = –4.38 (1)		84.60
		nwm (net): 🏗 = –3.66 (1)		
7 Sales and customer service		nwm (grss): 🏗 = –3.52 (1)		69.48
occupations		nwm (net): 🐮 = –3.87 (1)		
8 Process, plant and machine		nwm (grss): 🐮 = –4.43 (1)		14.16
operatives		nwm (net): 🐮 = –4.42 (1)		
9 Elementary occupations		nwm (grss): ఔ = −3.66 (1)		47.62
		nwm (net): 🐮 = –4.00 (1)		

#### Table 11. UK Non-white males (NWM): Augmented Dickey Fuller (ADF) tests on group earnings by occupation in the period 2001Q2-2014Q3 (54 obs.)

#### Endnotes

<sup>1</sup> Stryker and Burke (2000) provide an exhaustive historical account of the Theory of Identity.