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EXPLAINING CROSS-NATIONAL VARIATIONS IN THE SCALE OF INFORMAL EMPLOYMENT: AN EXPLORATORY ANALYSIS OF 41 LESS DEVELOPED ECONOMIES

ABSTRACT

Purpose

The aim of this paper is to evaluate critically the competing explanations for the cross-national variations in the scale of informal employment which variously correlate higher levels of informal employment with economic under-development ('modernisation' theory), corruption, higher taxes and state interference ('neo-liberal' theory) and inadequate state intervention to protect workers from poverty ('structuralist' theory).

Methodology

To do this, data on the prevalence of informal employment collected by the International Labour Organisation using a common survey method across 41 less developed economies is analysed and compared using bivariate regressions with World Bank development indicators.

Findings

Some 34.4 per cent of the non-agricultural workforce is in informal employment across these 41 countries, with the share in informal employment ranging from 83.6 per cent in India to 6.1 per cent in Serbia. Evaluating critically the competing explanations, a call is made for a synthesis of the modernisation and structuralist theoretical perspectives in a new 'neo-modernisation' theory that tentatively associates higher levels of informal employment with economic under-development, smaller government and inadequate state intervention to protect workers from poverty.

Research limitations

Based on 41 cases, a multivariate regression analysis was not possible to determine how important each characteristic is to the final outcome whilst controlling for the other characteristics.

Practical implications

This paper tentatively displays that wider economic and social policies, such as social protection, are significantly correlated with the level of informal employment.

Originality/value

This is the first paper to use a direct survey to analyse and explain cross-national variations in informal employment in less developed economies.

Keywords: informal economy; shadow economy; underground sector; emerging economies; development economics; economic development.

Introduction

From the middle of the twentieth century, a view predominated that the informal economy was purely a developing country phenomenon and represented a pre-modern mode of production that was steadily disappearing with the advent of modernisation and economic development (Geertz, 1963; Gilbert, 1998; Lewis, 1959). Since the turn of the new millennium however, there has been growing recognition that informal employment prevails in developed as well as developing economies and is growing in many global regions (Slavnic, 2010; Webb et al., 2009; Williams and Lansky, 2013). Indeed, in many developing countries, the majority of non-agricultural workers are in informal employment (ILO, 2013; Dibben and Williams, 2012). The result is that there is a need for scholarship on human resources and labour economics to broaden its scope beyond formal employment to explaining the scale of informal employment (e.g., Darwish and Singh, 2013; Lopez and Teixeira, 2013). In this paper, the aim is to contribute to the advancement of knowledge on this expanded view of human resources and labour economics by evaluating critically the competing explanations for the cross-national variations in the scale of informal employment across less developed economies.

To do this, the first section will briefly review how informal employment has been defined and measured along with how the cross-national variations in the scale of informal employment have been variously explained to result from either economic under-development (modernisation theory), corruption, high taxes and state interference (neo-liberal theory) or inadequate state intervention to protect workers from poverty (structuralist theory). Revealing that there has been little attempt to evaluate critically these competing explanations in relation to the variations in the scale of informal

employment across less developed economies, this paper seeks to fill that gap. To do so, the second section will introduce the database, namely the International Labour Organisation's (ILO) country surveys on informal employment which covers 41 less developed economies, along with the development indicators here used to evaluate critically the validity of the rival explanations for the cross-national variations in the level of informal employment. The third section then reports the descriptive results on the varying share of all non-agricultural jobs that are in informal employment across these 41 less developed economies followed in the fourth section by a preliminary analysis of the validity of the competing explanations for the varying prevalence of informal employment across less developed economies (albeit only using bivariate correlations rather than multivariate regression analysis due to only 41 cases being available). The fifth and final section draws some conclusions by summarising the findings about the share of non-agricultural jobs in informal employment and how this varies cross-nationally, and tentatively calls for a synthesis of existing theories in the form of a new 'neo-modernisation' theory.

Informal employment: definitions, measurements and explanations

Defining informal employment

This paper adheres to the widely agreed definition of informal employment developed by the International Conference of Labour Statisticians (ICLS) (Hussmans, 2005; ILO, 2011, 2012). Informality can be defined using either enterprises or jobs as the unit of observation. As Table 1 displays, if enterprises are the unit used, then the result is to

define informality in terms of ‘employment in the informal sector’ (A+B) whilst if jobs are used, informality is defined in terms of ‘informal employment’ (A+C).

INSERT TABLE 1 ABOUT HERE

Here, those in informal employment (A+C), akin to the 17th ICLS in 2003, are defined as those persons whose main jobs lack basic social or legal protections or employment benefits and may be found in the formal sector, informal sector or households. Persons in informal employment include: (a) own-account workers self-employed in their own informal sector enterprises; (b) employers self-employed in their own informal sector enterprises; (c) contributing family workers; (d) members of informal producers’ cooperatives; (e) employees with informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; (f) own-account workers engaged in self-provisioning, if considered employed in the sense that the production makes an important contribution to household consumption (ILO, 2012, 2013). With regard to (e) above, an employee is defined as in informally employment if the employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (e.g., notice of dismissal, severance pay, paid annual or sick leave) (ILO, 2012; 2013).

This definition thus enables informal employment in informal sector enterprises (A) to be distinguished from formal jobs in informal sector enterprises (B) as well as informal employment in formal sector enterprises (C). Informal enterprises are defined by

the 15th International Conference of Labour Statisticians in 1993 as private unincorporated enterprises which are unregistered or small in terms of the number of employed persons. An unincorporated enterprise is a production unit that is not constituted as a separate legal entity independently of the individual (or group of individuals) who owns it, and for which no complete set of accounts is kept. An enterprise is unregistered, meanwhile, if it is not registered under specific forms of national legislation (e.g., factories' or commercial acts, tax or social security laws, professional groups' regulatory acts). Holding a trade license or business permit under local regulations does not qualify as registration. An enterprise is small, meanwhile, if its size in terms of employment levels is below a specific threshold (e.g. five employees) determined according to national circumstances (Hussmans, 2005; ILO, 2011, 2012).

Measuring the level of informal employment

In a developing world context, it is often difficult to compare cross-national variations in the level of formal employment due to the lack of national-level formal labour market data. Analysing cross-national variations in the level of informal employment, which is by definition hidden from view, is therefore even more problematic. To overcome this, two options are available. Estimates of the cross-national variations in the level of informal employment can be produced using direct surveys of the level of informal employment and/or indirect measurement methods that use proxy indicators of informal employment or seek statistical traces of informal employment in macroeconomic data collected for other purposes (OECD, 2002, 2012; Ram and Williams, 2008).

These indirect methods for measuring cross-national variations can be divided into four broad techniques: those using individual non-monetary proxy indicators such as the number of very small enterprises (ILO, 2002) or electricity demand (e.g., Friedman et al, 2000; Lacko, 1999); those employing individual monetary proxy indicators such as the level of cash deposits (Gutmann, 1977) or money transactions (Feige, 2012; Frey and Weck, 1983), income/expenditure discrepancies (Paglin, 1994) and those using multiple indirect proxy indicators (e.g., Schneider, 2013; Schneider and Williams, 2013). The problem with all of these methods in a developing world context is that the data is often not available on these proxy indicators.

Direct surveys, meanwhile, can either take the form of quantitative, qualitative or mixed methods surveys. On the whole, the use of direct surveys to evaluate cross-national variations has taken the form of quantitative surveys. Examples include a three-country comparison of European nations (Pedersen, 2003) and a 2007 Eurobarometer survey of informal employment in the 27 member states of the European Union (Williams, 2013). Until now, direct survey methods have not been used to evaluate and explain cross-national variations in the level of informal employment in the developing world, despite the ready availability of a dataset of 41 countries where the International Labour Organisation has conducted surveys of the scale of informal employment (ILO, 2011, 2012). Here, therefore, it is this dataset which will be analysed to calculate the cross-national variations in the level of informal employment.

Before doing so however, it is necessary to outline how the cross-national variations in the scale of informal employment have been so far explained since the

intention in this paper is to evaluate critically these competing explanations in less developed economies.

Explaining cross-national variations in the level of informal employment

Until now, three competing perspectives have sought to explain the cross-national variations in the level of informal employment. These view higher levels of informal employment to be a result of either economic under-development (modernisation explanation), high taxes, public sector corruption and state interference in the free market (neo-liberal explanation) or inadequate state intervention to protect workers from poverty (structuralist perspective). Each is here considered in turn.

Modernisation explanation. During the twentieth century, informal employment was widely represented as a legacy of a pre-modern mode of production and viewed as fading from view as the modern formal economy became ever more hegemonic. Informal employment was therefore commonly portrayed as a residue from an earlier mode of production and disappearing. Viewed in this manner, those developing world countries in which informal employment is extensive are seen as portraying the characteristics of “under-development” and even “backwardness” whilst extensive formal sectors are viewed as representing “advancement” and “development” (Geertz, 1963; Gilbert, 1998; Lewis, 1959). The result is that informal employment is represented as an expression of under-development (in the normative sense of a lack of “progress”) that will disappear with economic advancement and modernisation. Applying this to explaining the cross-national variations in the extent of informal employment, it can be suggested that in less developed economies, there will be a higher prevalence of informal employment. To

explore its validity, the following hypothesis can be tested:

Hypothesis 1 (H1): informal employment will be more prevalent in less developed economies.

Neo-liberal explanation. Over the past few decades, nevertheless, not least due to the persistence and even expansion of informal employment globally, a range of competing explanations have emerged. For neo-liberal commentators, high levels of informal employment are a product of high taxes, a corrupt public sector and too much state interference in the workings of the free market. Informal employment is therefore a rational economic decision which people and businesses pursue in order to voluntarily exit the formal economy so as to avoid the costs, time and effort associated with formal employment (e.g., Becker, 2004; De Soto, 1989, 2001; London and Hart, 2004; Nwabuzor, 2005; Sauvy, 1984). As Becker (2004, p. 10) asserts, “informal work arrangements are a rational response by micro-entrepreneurs to over-regulation by government bureaucracies”. For such neo-liberal commentators, therefore, informal employment is a rational economic strategy pursued by those stifled by high taxes and state-imposed institutional constraints (De Soto, 1989, 2001; Perry and Maloney, 2007). The ongoing prevalence and even growth of informal employment is consequently a product of high taxes, public sector corruption, over-regulation and state interference in the free market and the resultant remedy is seen to be to pursue tax reductions, reduce corruption, deregulation and minimal state intervention. From this neo-liberal perspective, therefore, informal employment will be higher in countries with higher taxes, public sector corruption and state interference in the workings of the free market. To

explore the validity of this neo-liberal explanation, the following hypothesis can be tested:

Hypothesis 2 (H2): informal employment will be more prevalent in less developed countries with higher tax rates, greater public sector corruption and higher levels of state interference in the free market.

Structuralist explanation. For structuralist scholars in contrast, the widespread existence and even expansion of informal employment in economies is represented as a direct by-product of the emergence of a de-regulated open world economy (Castells and Portes, 1989; Gallin, 2001; Hudson, 2005; Slavnic, 2010). The on-going functional integration of a unified global economic system is resulting in subcontracting and outsourcing becoming a key vehicle for integrating informal employment into contemporary capitalism, resulting in further downward pressure on wages and the erosion of incomes and welfare provision, and the growth of yet more informal employment. As Fernandez-Kelly (2006: 18) states, “the informal economy is far from a vestige of earlier stages in economic development. Instead, informality is part and parcel of the processes of modernization”. Indeed, for Davis (2006: 186), such “primitive forms of exploitation ... have been given new life by postmodern globalization”.

From this structuralist perspective, in consequence, informal employment is a largely unregulated realm composed of low-paid and insecure work carried out under “sweatshop-like” conditions as a survival tactic by marginalised populations excluded from employment in the formal economy (Castells and Portes, 1989; Davis, 2006; Gallin, 2001). Informal employment is therefore necessity-driven, and participants forced into

this realm by their inability to find formal employment (e.g., Castells and Portes, 1989; Gallin, 2001; ILO, 2002). In the new post-Fordist and post-socialist era, those engaged in informal employment are unwilling pawns cast into this sphere as a survival mechanism. To evaluate the validity of this structuralist explanation, the following hypothesis can be tested:

Hypothesis 3 (H3): informal employment will be more prevalent in those less developed countries with lower levels of state intervention to protect workers from poverty.

Evaluations of the competing explanations. Most commentators explaining the cross-national variations in the scale of informal employment have done so by adopting one of these ‘logics’. For example, the ILO (2012) adopt the modernisation perspective that the preponderance of informal employment decreases as GDP per capita grows, whilst Schneider and Williams (2013) has largely sought to display the validity of various tenets of the neo-liberal perspective such as the need to reduce taxes and the level of public sector corruption so as to decrease the scale of informal employment.

Few scholars have evaluated critically the competing theories. When they have done so, however, the finding has been that no one perspective is universally valid. It has been contended, for example, that structuralist explanations are more valid with regard to informal waged work and the neo-liberal perspective more valid when explaining informal self-employment (Perry and Maloney, 2007; Williams et al., 2013), or that the structuralist explanation is valid when explaining informal employment in relatively deprived populations but the neo-liberal perspective when explaining informality in

relatively affluent populations (Evans et al., 2006; Pfau-Effinger, 2009; Williams, 2004; Williams and Windebank, 2006). Studies have similarly argued that the structuralist explanation is more valid when explaining women's necessity-driven informal employment and the neo-liberal explanation to the voluntary exit rationales that characterise men's engagement (Franck, 2012; Grant, 2013; Williams, 2011). The only study that has evaluated critically the competing theories as explanations for cross-national variations in the scale of informal employment has focused upon the member states of the European Union and finds evidence to support the tenets of both the modernisation and structuralist perspectives but little evidence to support most of the tenets of the neo-liberal perspective (Williams, 2013).

Until now, however, no studies so far as is known have evaluated critically the validity of these perspectives when explaining the cross-national variations in the level of informal employment across less developed economies. It is to filling this gap that attention now turns.

Methodology: examining cross-national variations in the level of informal employment

To estimate the variations in the level of informal employment across less developed economies, the ILO surveys of informal employment conducted in 41 countries are here analysed. The main advantage of using these surveys is that they use the same common broad definition of informal employment as discussed above and also employ a very similar survey methodology when collecting data on the extent of informal employment using either an ILO Department of Statistics questionnaire sent to countries or

information from national labour force or informal sector surveys (for further details, see ILO, 2012).

Although the ILO (2012) provides brief statistical portraits of the size of informal employment, this paper will focus for the first time on how and why this varies cross-nationally and across global regions. It is important to state at the outset, nevertheless, that the findings reported here relate solely to non-agricultural employment. The ILO survey does not analyse employment in agriculture, hunting, forestry and fishing. If it was included, the level of informal employment would be doubtless much higher. Analysing the quality of the data collected using this survey method so far as the prevalence of informal employment is concerned, it is unknown whether the current dataset provides an accurate description of the level of informal employment. This is because there is no benchmark available for evaluating this. It is sometimes stated in developed economies that such direct surveys under-estimate the scale of informal employment relative to indirect measurement methods (Eurofound, 2013; OECD, 2012). This is similarly the case in developing countries (see Bardasi et al, 2010), particularly in relation to women's informal work (Franck and Olsson, 2014; Langstb and Salen, 2008). If anything, therefore,, the prevalence of informal employment might be higher than suggested by this survey. Moreover, people in different countries may well have differing tendencies to report or not report their informal work due to variations in whether this is deemed acceptable in terms of national norms, values and codes of conduct. Although this possibility cannot be ruled out, by adopting the same definition of informal employment and the same survey method and interview schedule for collecting the data, the survey reported here has sought to minimise the effects of such tendencies on the

findings. As such, although some caution must be exercised with regard to this data set due to such caveats, the country-level data reported in this paper is here deemed sufficiently comparable between countries to allow comparative analysis. It is also important to note that throughout this paper, “employment” refers to what participants self-report as their main job if the person has more than one job.

To analyse the wider economic and social characteristics that each theoretical perspective associates with higher levels of informal employment, meanwhile, indicators have been used from the World Bank database of development indicators for the year in which the survey of informal employment was conducted in each country (World Bank, 2013). The only indicators taken from a non-official sources are on perceptions of public sector corruption, which has been taken from Transparency International’s corruption perceptions index for the relevant year in each country (Transparency International, 2013) and the Social Progress Index as a measure of ‘development’ (Social Progress Imperative, 2014).

To evaluate the validity of the modernisation explanation that the level of development relates to the level of informality, the conventional indicator used in previous studies is GNP per capita (ILO, 2012; Yamada, 1996), although there is widespread criticism of this indicator as a proxy measure of the ‘development’ of an economy or the standard of living of its citizens (Kuznets, 1962). Here, therefore, both this and additional measurements of the level of ‘development’ are used, namely:

- GNP per capita;
- household final consumption expenditure per capita (i.e., private consumption per capita). This covers the market value of all goods and services, including durable

products (e.g., cars, washing machines, and home computers), purchased by households (World Bank, 2013);

- Human Development Index (HDI) - this is a composite of life expectancy, education, and income indices intended to shift the focus of development from national income accounting to people-centred policies (United Nations Development Programme, 2014).
- Social Progress Index (SPI) – this measures the extent to which countries provide for the social and environmental needs of their citizens. Fifty-two indicators in the areas of basic human needs, foundations of wellbeing, and opportunity show the relative performance of nations (Social Progress Imperative, 2014).

To evaluate the validity of the neo-liberal explanation that higher levels of informal employment are the product of high taxes, corruption and state interference in the free market meanwhile, indicators previously used by Eurofound (2013) and the European Commission (2013) when assessing the assumptions of the neo-liberal perspective are used, namely the World Bank (2013) country-level indicators on:

- Taxes on goods and services as a percentage of revenue, which includes general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies;
- Taxes on revenue (excluding grants) as a percentage of GDP. Revenue is cash receipts from taxes, social contributions, and other revenues such as fines, fees, rent, and income from property or sales. Grants are also considered as revenue but are excluded here.

- Tax revenue as a percentage of GDP. Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.

Meanwhile, the corruption assertion of the neo-liberal perspective is assessed using:

- Transparency International's Corruption Perceptions Index (CPI) (Transparency International 2013). This is a composite index of perceptions of public sector corruption that draws on 14 expert opinion surveys and scores nations on a 0-10 scale, with zero indicating high levels and 10 low levels of perceived public sector corruption;
- The percentage of firms stating that they are expected to give gifts in meetings with tax officials, and
- The percentage of firms giving informal payments to public officials.

To evaluate both the neo-liberal explanation that state interference results in greater levels of informal employment, as well as the structuralist explanation that it is a product of inadequate levels of state intervention, the indicator used is that previously employed in reports by the European Commission (2013) and Eurofound (2013) when assessing the assumptions of the neo-liberal and structuralist perspectives, namely:

- Social contributions as a % of revenue. Social contributions include social security contributions by employees, employers, and self-employed individuals, and other contributions whose source cannot be determined. They also include actual or imputed contributions to social insurance schemes operated by governments,
- State revenue (excluding grants) as a % of GDP, and

- Expense of government as a % of GDP, which is a measure of the size of government and therefore a loose proxy of the degree of intervention. The expense of government is the level of cash payments for the operating activities of the government in providing goods and services. It includes compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rent and dividends (World Bank, 2013).

Meanwhile, and to analyse the structuralist thesis that informal employment is associated with the level of poverty, two indicators are analysed:

- the percentage of the population living below the national poverty line (ILO, 2012), and
- the size of the poverty gap at \$1.25 per day in personal purchasing power standards. The poverty gap is here taken as the mean shortfall from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence (World Bank, 2013).

To analyse the relationship between cross-national variations in the level of informal employment and these economic and social characteristics that each perspective contends are associated, and given the small sample size of just 41 countries for which data are available and lack of necessary controls to include in a multivariate regression analysis, it is only possible here to conduct bivariate regression analyses. Here, Spearman's rank correlation coefficient (r_s) is used due to the non-parametric nature of the data. As will become apparent, however, despite the limitation of only using bivariate

regression analysis, meaningful findings are produced with regard to the validity of the different theories.

Below, therefore, firstly the variable level of informal employment across the 41 less developed economies for which data are available will be reported and secondly, a preliminary analysis will be carried out of the wider economic and social conditions that each theory asserts are correlated with higher levels of informal employment in order to evaluate the competing theories.

Findings: cross-national variations in the level of informal employment

Examining the findings for the 41 countries for which data is available on the level of informal employment, Table 2 reveals that the simple unweighted average is that the majority (53.9 per cent) of non-agricultural workers in these less developed economies are in informal employment as their main job. However, and given the variable size of the workforce across countries, a weighted average figure is here employed that takes into account the variable size of the workforce in each country. The resultant finding is that across all 41 countries, just over one-third (34.4 per cent) of non-agricultural workers are in informal employment as their main job. Informal employment, therefore, is not some minor leftover of little importance. As the main occupation of over one in three of the non-agricultural workforce, this is a sizeable realm that employs a significant proportion of the labour force in these less developed economies.

INSERT TABLE 2 ABOUT HERE

However, these figures for the 41 countries hide some marked variations across global regions. To analyse this, the 41 countries for which data are available are divided, using the World Bank (2013) classification into six regions, namely East Asia and the Pacific (China, Indonesia, Philippines, Thailand and Vietnam), Europe and Central Asia (Armenia, FYR Macedonia, Moldova, Serbia and Turkey), Latin America and the Caribbean (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela), the Middle East and North Africa (Egypt and the West Bank and Gaza), South Asia (India, Pakistan and Sri Lanka) and sub-Saharan Africa (Lesotho, Liberia, Madagascar, Mali, Namibia, South Africa, Tanzania, Uganda, Zambia and Zimbabwe).

Analysing the variations in informal employment across less developed economies in these global regions, the finding is that the weighted proportion of the non-agricultural workforce in informal employment as their main job ranges from one in four (26.8 per cent) in Europe and Central Asia to over four out of five (82.6 per cent) in South Asia. The share of the working population in informal employment as their main job, therefore, is not evenly distributed across the globe.

The variations between countries within each of these global regions, nevertheless, are as marked as the variations between global regions. As Table 3 displays, the proportion of the non-agricultural workforce that is in informal employment ranges from 83.6 per cent of the non-agricultural workforce in India to 6.1 per cent in Serbia. Indeed, in 24 (59 per cent) of the 41 nations, over half of the non-agricultural workforce is in informal employment. Informal employment, in consequence, is not some small segment of the economy of limited importance.

INSERT TABLE 3 ABOUT HERE

Table 3 also displays the proportion of informal employment in each country that is waged employment as opposed to own-account work conducted on a self-employed basis. This reveals importantly that that not all informal employment is waged work. Again, there are some marked variations across countries in the proportion of informal employment that is waged work, ranging from 89.9 per cent in Lesotho to 17.5 per cent in Liberia. On the whole, however, there is a statistically significant correlation between the proportion of the non-agricultural workforce which is in informal employment and the proportion of informal employment that is waged work. As Figure 1 reveals, the more informalised the economy, the more likely is informal employment to be waged work. Indeed, using Spearman's rank correlation coefficient (r_s) due to the non-parametric nature of the data, the finding is that the greater the degree of informalisation of a country measured in terms of the proportion of the non-agricultural workforce in informal employment, the greater is the proportion of the informal workforce in waged employment, and this is statistically significant within a 99 per cent confidence interval ($r_s = -.413^{**}$).

INSERT FIGURE 1 ABOUT HERE

How, therefore, can these cross-national variations in the level of informalisation across less developed economies be explained? Is there an association between the level of

informal employment and the various economic and social conditions in countries identified by the various theories earlier discussed? It is to this attention now turns.

Analysis: evaluating the competing theories

To explain the above cross-national variations in the level of informal employment, a preliminary analysis of the validity of each of the three theoretical perspectives is here conducted. Firstly, and to evaluate the validity of the modernisation perspective that the share of informal employment is lower in “developed” wealthier economies and greater in “less developed” economies, the correlation between such employment and GNP per capita is analysed across these 41 less developed economies. As Figure 2 reveals, and again using Spearman’s rank correlation coefficient due to the nonparametric nature of the data, there is a strong significant relationship between the level of informal employment in a country and its GNP per capita ($r_s = -.560^{**}$). The direction of this relationship is that the share of the non-agricultural workforce in informal employment is higher in less developed economies with lower levels of GNP per capita. This is akin to previous findings (ILO, 2012; Yamada, 1996). Similar to this survey, nevertheless, these studies cannot establish the direction of the correlation in terms of any cause-effect relationship. This, in consequence, is a limitation of both the current as well as previous studies.

INSERT FIGURE 2 ABOUT HERE

In recent years, alternative indicators of the level of ‘development’ have emerged that take into account a wider range of variables other than simply economic productivity. Evaluating these other measures of ‘development’ more widely defined, the finding is that there is a strong significant correlation between cross-national variations in the level of employment and cross-national variations in not only household consumption expenditure per capita ($r_s = -.613^{**}$) but also the Human Development Index ($r_s = -.497^{**}$) and Social Progress Index ($r_s = -.509^{**}$). Informal employment therefore, by a range of indicators of ‘development’, is larger in less developed economies, thus confirming H1.

To evaluate the neo-liberal perspective, whether the cross-national variations in the level of informal employment are correlated with taxes, corruption and state interference are analysed. Starting with the neo-liberal assertion that informal employment is higher when there is public sector corruption because this results in citizens exiting the formal economy so as to seek livelihoods beyond the corrupt public sector officials, the finding is that countries with higher perceived levels of public sector corruption have higher rates of informal employment ($r_s = -.564^{**}$). Some support is therefore found for this neo-liberal thesis in less developed economies. However, moving beyond perceptions and analysing whether citizens have encountered problems with corruption in practice, the finding is that there is no correlation between cross-national variations in the level of informal employment and cross-national variations in either the share of firms expected to give gifts in meetings with tax officials ($r_s = .224$) or the percentage of firms making informal payments to public officials ($r_s = .066$). No support is thus found that public sector corruption is in practice associated with the level of informal employment across these 41 less developed economies.

Is it valid therefore, that the level of informal employment is a product of ‘exit’ from the formal economy due to high taxes? Given that this is a core aspect of both neo-liberal explanations as well as a key policy measure they advocate, several measures of taxation levels are here analysed. Beginning with the relationship between the cross-national variations in the scale of informal employment and the level of taxes on goods and services as a percentage of revenue, the inverse of the neo-liberal suggestion is found. The scale of informal employment increases as taxes on goods and services decreases and this is a statistically significant correlation ($r_s = -.400^{**}$).

This is similarly the case when two further measures of tax levels are analysed. There is a strong significantly correlation between cross-national variations in the level of revenue (excluding grants) as a share of GDP and the level of informal employment ($r_s = -.626^{**}$). The levels of informal employment are significantly lower in countries where revenue is a higher proportion of GDP. Similarly, the same strong statistically significant relationship exists between the level of informal employment and cross-national variations in the level of tax revenue as a proportion of GDP ($r_s = -.637^{**}$). Again, informal employment is significantly lower in less developed economies where the level of tax revenue as a proportion of GDP is higher.

There is thus no evidence to support the neo-liberal argument that cross-national variations in the level of informal employment is associated with levels of public sector corruption practice and thus by a desire to ‘exit’ the formal economy due to public sector corruption practices. There is also insufficient evidence to validate the neo-liberal thesis that higher tax rates result in exit from formal employment and a shift into informal employment. Instead, the inverse is the case; higher tax levels are correlated with lower

levels of informal employment, presumably since this provides greater state revenue for social transfers so that citizens can receive some level of social protection.

To evaluate the validity of the neo-liberal argument that state interference in the operation of the market leads to higher levels of informal employment, as well as the contrary structuralist argument that the scale of informal employment reduces with greater state intervention, the relationship between cross-national variations in the scale of informal employment and both state revenue as a share of GDP as well as the expense of government as a share of GDP are analysed. The finding is that there is a steep decline in the scale of informal employment as both state revenue as a share of GDP increases ($r_s = -.605^{**}$) as well the expense of government as share of GDP ($r_s = -.555^{**}$). Bigger government leads to a decline, rather than increase, in the prevalence of informal employment. Similarly, when the level of social contributions as a percentage of revenue increases, there is a steep decline in the scale of informal employment. This is statistically significant ($r_s = -.560^*$). The neo-liberal assertion that state interference leads to greater informal employment is therefore refuted and instead, support found for the structuralist thesis that such employment is associated with too little state intervention in the form of social protection.

The structuralist thesis that cross-national variations in informal employment are associated with the level of poverty is also supported. There is a strong statistically significant relationship between cross-national variations in the proportion of the population living below the national poverty line and the scale of informal employment. The greater is the share of the population living below the national poverty line in less developed economies, the higher is the scale of informal employment ($r_s = .396^*$). There is

also a strong statistically significant relationship between cross-national variations in the size of the poverty gap, expressed as a percentage of the poverty line of \$1.25 per day in personal purchasing power standards, and cross-national variations in the scale of informal employment ($r_s=.692^{**}$). The intimation is that informal employment might well be a last resort turned to by marginalised groups with no other means of livelihood or support, as the structuralist perspective posits.

Conclusions

To explain the cross-national variations in the scale of informal employment, an exploratory analysis has been conducted of the validity of three competing theoretical perspectives in relation to less developed economies. These variously assert that higher levels of informal employment are correlated with economic under-development (modernisation theory), corruption, higher taxes and state interference (neo-liberal theory) and inadequate state intervention to protect workers from poverty (structuralist theory). Analysing data from direct surveys conducted in 41 less developed economies by the International Labour Organisation, the finding is that just over one in three (34.4 per cent) of the non-agricultural workforce participate in informal employment as their main job across these less developed economies, although there are marked cross-national variations, ranging from 83.6 per cent in India to 6.1 per cent in Serbia. Informal employment in consequence, is not some small segment of the labour market. In 59 per cent of the less developed economies surveyed, the majority of the non-agricultural workforce is engaged in informal employment.

Evaluating the competing explanations, the finding is that although the modernisation perspective tentatively appears to be valid that informal employment is associated with “under-development”, none of the tenets of the neo-liberal thesis are validated. Instead, there is tentative support for the structuralist thesis that high taxes and social transfers are associated with lower levels of informal employment because these reduce the necessity to engage in such work in the absence of other means of support and livelihood. There is also support for the structuralist viewpoint that informal employment is closely associated with the level of poverty in less developed economies.

The outcome is a call for a synthesis of the tenets of the modernisation and structuralist explanations. This finding in relation to less developed economies is similar to the earlier finding when seeking to explain cross-national variations across the 27 member states of the European Union (Williams, 2013). The tentative intimation is that cross-national variations in the scale of informal employment across less developed economies can be explained using the same broad economic and social characteristics as cross-national variations in the more developed world of Europe. Put explicitly, lower levels of informal employment are associated with development and state intervention in the form of higher tax rates and social transfers to protect workers from poverty. This new “neo-modernisation” explanation not only applies when explaining the cross-national variations in informal employment in the developed world (Williams, 2013) but also, as shown in this paper, the developing world.

To further evaluate the validity of this new neo-modernisation perspective, what is now required is to test whether similar findings result when using different measures of the scale of informal employment, such as indirect measurement methods (e.g.,

Schneider, 2013) as well as when time-series data is examined for individual nations. Moreover, future studies need to analyse a wider range of indicators of state intervention to explore whether the findings hold for all types of state intervention or whether some types lead to a rise in the scale of informal employment. If a broader range of countries were analysed furthermore, multivariate regression analysis might also be used to determine how important each characteristic is to the final outcome whilst controlling for the other characteristics. This would then overcome a limitation of this paper which is based on just 41 less developed country cases and bivariate regressions.

This relationship between informal employment and under-development, lower tax rates and inadequate state protection to protect workers from poverty moreover, has practical policy implications for governments. In stark contrast to the previous policy literature that has focused upon whether repressive measures need to be introduced and/or incentives to encourage formalisation (Eurofound, 2013; Feld and Larsen, 2012; OECD, 2012), this paper has displayed that wider economic and social policies associated with the overarching modernisation of economies, state bureaucracies and social protection are also important. Put another way, it tentatively reveals that dealing with informal employment cannot be treated separately from wider economic and social policies.

In sum, this paper has displayed that a sizeable share of the total workforce across these 41 countries are in informal employment as their main job and that marked cross-national variations exist in the proportion in informal employment, which is associated with the level of development, tax rates, the size of government, level of social contributions and poverty rates. Given that such conclusions have to be cautious due to the limited data set and the sensitivity of the results in such cross-national comparisons,

this re-theorisation now needs to be tested longitudinally within nations and to a wider range of countries, using more refined multivariate regression analysis, so as to evaluate whether the relationship holds as well as which characteristics are most significantly correlated with informal employment. If this paper encourages such research as well as wider evaluation of the type of modernisation of economies and societies required, then it will have achieved its intention.

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Table 1 The anatomy of informality

Economic units	Informal jobs	Formal jobs
Informal economic units	A	B
Formal economic units	C	D

Source: ILO (2012)

Table 2 Informal employment as % of total non-agricultural employment (unweighted and weighted) in less developed economies: by global region

Global region	% of non-agricultural workforce in informal employment, unweighted	% of non-agricultural workforce in informal employment, weighted	Number of countries
East Asia & Pacific	44.1	44.0	5
Europe and Central Asia	17.0	26.8	5
Latin America & Caribbean	57.0	50.5	16
Middle East & North Africa	54.9	51.5	2
South Asia	74.7	82.6	3
Sub-Saharan Africa	59.4	53.2	10
All global regions	53.9	34.4	41

Source: derived from ILO (2012)

Table 3 Informal employment as share of non-agricultural employment, 41 less developed countries

Country	Year	% of jobs in informal employment	% of informal employment which is waged work	Global region (World Bank classification)
India	2009/10	83.6	52.8	South Asia
Mali	2004	81.8	21.9	Sub-Saharan Africa
Pakistan	2009/10	78.4	47.0	South Asia
Tanzania	2005/6	76.2	26.8	Sub-Saharan Africa
Bolivia	2006	75.1	46.4	Latin America & Caribbean
Honduras	2009	73.9	39.8	Latin America & Caribbean
Madagascar	2005	73.6	42.3	Sub-Saharan Africa
Indonesia	2009	72.5	50.8	East Asia & Pacific
Paraguay	2009	70.7	59.8	Latin America & Caribbean
Philippines	2008	70.1	52.8	East Asia and Pacific
Peru	2009	69.9	41.0	Latin America & Caribbean
Zambia	2008	69.5	35.3	Sub-Saharan Africa
Uganda	2010	69.4	34.8	Sub-Saharan Africa
Vietnam	2009	68.2	40.2	East Asia & Pacific
El Salvador	2009	66.4	42.4	Latin America & Caribbean
Nicaragua	2009	65.7	41.6	Latin America & Caribbean
Sri Lanka	2009	62.1	50.3	South Asia
Ecuador	2009	60.9	52.5	Latin America & Caribbean
Liberia	2010	60.0	17.5	Sub-Saharan Africa
Colombia	2010	59.6	29.9	Latin America & Caribbean
West Bank & Gaza	2010	58.5	76.5	Middle East & North Africa
Mexico	2009	53.7	55.6	Latin America & Caribbean
Zimbabwe	2004	51.6	N.A.	Sub-Saharan Africa
Egypt	2009	51.2	N.A.	Middle East & North Africa
Argentina	2009	49.7	54.3	Latin America & Caribbean
Dominican rep	2009	48.5	42.1	Latin America & Caribbean
Venezuela	2009	47.5	34.3	Latin America & Caribbean
Namibia	2008	43.9	73.9	Sub-Saharan Africa
Panama	2009	43.8	39.7	Latin America & Caribbean
Costa Rica	2009	43.8	43.9	Latin America & Caribbean
Thailand	2010	42.3	N.A.	East Asia & Pacific
Brazil	2009	42.2	53.7	Latin America & Caribbean
Uruguay	2009	39.8	34.3	Latin America & Caribbean
Lesotho	2008	34.9	89.9	Sub-Saharan Africa
South Africa	2010	32.7	64.5	Sub-Saharan Africa
China	2010	32.6	40.2	East Asia & Pacific
Turkey	2009	30.6	N.A.	Europe & Central Asia
Armenia	2009	19.8	66.9	Europe & Central Asia
Moldova Rep	2009	15.9	55.7	Europe & Central Asia
Macedonia	2010	12.6	60.0	Europe & Central Asia
Serbia	2010	6.1	53.4	Europe & Central Asia

Source: derived from ILO (2012)

Figure 1 Relationship between level and nature of informal employment



Figure 2 Relationship between level of employment and GNP per capita

